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Original Articles.

THE MORAL SIGNIFICANCE OF STERILITY.

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There is a growing disposition among gynecologists to attribute many of the especial conditions which fall under their notice to a habit of sterility, self-caused or physical. The argument in favor of the co-education of the sexes, of enlarged spheres of action for women, and of her general admission to political, professional and clerical equality with man, would fail of conviction if the question of her sexuality should be forgotten. By inherent force of character she has carved out for herself a place among the potential factors of civilization, and has enforced a respectful admission of her rights and position far different from that which obtained among the early races, when she was regarded as a mere animal for the sensual gratification of men, or for the common drudgery of an agricultural life. The physical differences characteristic of the sexes, and the especial functions incident thereunto in each, necessitate differences of vocation, so that, both for men and women, there are particular spheres of usefulness.

It is a habit among some advanced female thinkers to deride and ridicule the expression "a woman's sphere," as if the words contained in themselves something that was dishonorable, or as if they placed restrictions upon her possibilities, or a limitation upon her usefulness, not demanded by her physiological adaptability. The function of child-bearing, when used as an argument against her assuming the responsibilities and embarassments of a business life, has been held up to open scorn by such as these, and the sacred right of motherhood has been travestied into a curse. To argue from individual cases, or to cite, in defense of a theory, the few sporadic instances where women have carried out both relations, is a species of logic lacking every element of success. The

esoteric teachings and examples of the agitators are opposed by the exoteric lessons of daily occurrence in class-room and private practice.

The artifices that are made use of by married people for the limitation of their offspring are so abominable in themselves and so injurious, both to moral and physical health, that it becomes the duty of all teachers to lift up their voices against them. It is not improbable that such practices would become much more general if a woman should engage in pursuits in which a growing family would impede her activity. I do not believe that any woman can become the mother of healthy children if she is constantly pre-occupied by the cares of state, by the excitement and disappointments of business, or if she be engaged in pursuits that unsettle the just equipoise of mind and body. She cannot safely ignore the physiological demands made upon her. I am not now dealing with the exceptions, but with the whole sex—not with woman as she *was*, but with the sex as it stands to-day in relation to an advanced civilization. There are many forces at work in moulding a woman's physical strength, and in influencing her physiological processes, which did not obtain in earlier history. It is illogical to draw deductions from her past, when her manner of living was essentially different.

My apology for dwelling at some length upon the question of sterility, if any apology be needed, will be found in the manifold publications of the day, in which this topic, either separately or in its collateral relations, is being discussed by the best writers. A question discussed in one aspect by women, in another by social reformers, and in still another by the profession. *Tempora mutantur, et nos mutantur in illis.*

There is a physical significance in the question of sterility which will demand separate treatment. The subdivisions of the moral aspect, which seem to be necessary, are as follows:

1. Limitation of offspring or conjugal onanism.
2. Influence of society and civilization.
3. Perverted sexual relations.
4. Incompatibility of sentiment.
5. Consanguineous marriages.

There are many other factors at work, which, at first glance, might seem to act primarily, but it will be found, as the argument progresses, that they are embraced under some one of the five subdivisions, and that they are only salient conditions of greater underlying truths.

The average age of marriage in its relation to the growth of the family will be considered as a part of subdivision 2; ("The influence of society and of civilization.") Enforced celibacy will also fall under the same head. It will readily appear from an intelligent survey of the various ramifications of this subject, both in its individual and in its social aspect, that an endless number of predisposing and exciting causes constantly arise, and assume greater or less prominence. As a rule they may all be

classed and considered as parts of the divisions already made. In this way too we avoid confusion. I prefer to begin with the moral significance of sterility, because its complex nature, and the infrequency with which it is discussed, requires more thought and space than do those physical causes with which every gynecologist is familiar. In a certain sense we stand here upon an insecure foundation. No exact formulæ can as yet be mathematically stated, because we have no known *constants*, either in relation to man or in relation to domestic animals. A strong probability is derived from clinical experience, and an equally strong inference may be drawn from a comparison of certain authenticated facts, correlated, as they are, with others, which have a strong presumptive existence. The theory of Pangenesis, which locates individual expressions of character in millions of germules, which germules may be latent for generations, or may become active at once by fastening upon an affinity, certainly recognizes a sterility by inheritance, just as it adjudges other peculiarities by ancestral heredity to the potential germule. This question of transmitted sterility, as a characteristic of certain families, is so closely connected with inter-marriages that I shall defer its consideration until the subject of consanguineous marriages shall demand our attention.

Conjugal Onanism.—"Civilization is hard on woman. Stimulated to efforts beyond her strength, ambitions excited which she cannot reach, with opportunities restricted, directly and indirectly, by her sex, whatever she may have gained in civilization, it cannot be denied that she has lost tranquility; and in losing tranquility, she has lost much. All through animated existence Nature requires repose for her most serious processes; and the most serious part, in keeping the race alive, woman enacts. She comes up to full womanhood with the endowment of her generative capacities as an ever present influence, controlling her growth in mind and body. In ripe womanhood her sex is overshadowing, and when her fruitage is past, its influence still surrounds her, like a glory, to her latest day. The rapid progress of present events leaves little time for men to adjust themselves to the constantly varying situations; while women are made to sustain a strain which is always heavy and sometimes more than they can bear. It is not for me to adjudge the responsibility or to declare the perfect remedy. It is enough, for our present purpose, to ascertain the facts. And I believe the fact to be that the imperfect sexual hygiene of woman is a prolific source of evil to them in particular and to the race in general; for men, on the whole, get along very well in civilization, notwithstanding some strong evil tendencies; at least, enough men survive in healthful vigor to sustain a vigorous race. If race degeneration shall actually come, it will come through degeneration of women; and the one cause, tending more than all others in my opinion, to woman's degeneration is her ill-regulated sexual life."– Charles Fayette Taylor,

M.D., "Effect on Women of Imperfect Hygiene of the Sexual Function," *American Journal of Obstetrics*, January, 1882.

Dr. William Goodell in "Lessons in Gynecology," page 430-432, writes as follows: "Certain causes of uterine disease there are which I would gladly leave unnoticed, for it is hard, in acceptable language, even to allude to them. But so wide-spread are the evils resulting from them, that to pass them by would be a flagrant sin of omission. "Two things come not back," said the Caliph Omar, "the sped arrow and the spoken word." Deeply impressed by the wisdom of this saying, I shall try to speak on these delicate subjects as never to regret what I have spoken. Arguing from a strictly practical and not from a sentimental point of view, but with all reverence, I hold that the love interchanged between man and woman is no mere operation of the mind, no sheer intellectual process. However pure this passion may be it is needfully two-fold in its nature. It is an alloy, made up, like ourselves, of body and mind; the grosser mould so interflexed with the more ethereal that the one finds its most passionate expression in the fruition of the other. Abstract love between the sexes cannot, therefore, exist in any other sense than that engendered by blood ties. Forgetful of this absolute law of one being, sentimentalists have judged too harshly of Abelard and lavished too one-sided a sympathy upon Heloise. Without further comment, the ante-nuptial relations, at least such as custom commonly sanctions in this land —and, I believe, in no other—are therefore, when prolonged, very disturbing to a young girl's health. Long engagements, by keeping up a wearying nervous erethism, are not only recognized, but even classified, by alienists, as one of the causes of insanity in women. Much more frequently the nervous exaltation is spent upon the reproductive organs; for there follows an awakening of sense, which is not, as in man, appeased by the distractions of business pursuits. Uterine trouble from this source any open-eyed physician will over and over again see. Now, it is true, that in love affairs, the physician must be no meddler; match-making is certainly not his business. But, as a tried and valued friend, as a brother beloved, he can speak out when others may not even hint, or, when consulted by an anxious mother about symptoms in her daughter, plainly referable to the reproductive organs, he can disclose the cause, and thus be the means of hastening on the cure. If the caresses of lovers are prejudicial to good health, every like relation between the sexes must be exposed to like dangers. In too many rural districts and in the lower classes of citizens such license is tolerated in the social intercourse between the youth of each sex as must be destructive both to good health and good morals. * * * The excesses of the honey-moon journey, conjoined with its fatigues and its discomforts, are too often the starting-point of uterine disease. Here, again, will the family physician delicately proffer his counsel. In chosen words he can hint at

moderation in all things, and suggest the avoidance of the usual exhausting round of travel and of sight-seeing. He must, still further, take cognizance of the sexual relations between husband and wife, relations which, when abused, are productive of much mischief. All excess in that direction he will discountenance. Unmastered importunity and too submissive an affection must be met by separate beds, by uncommunicating rooms, and, if need be, by strong expostulation. Criminal abortion he must denounce, and that boldly, if he values the health and the happiness of his fellow-creatures, and a clear conscience before God and before man. But there are yet other secret sins which, like the plague of the frogs, creep out into "houses and bed-chambers and beds"—sins which, although vile and filthy, concern us as physicians. The wise son of Sirach has laid down the abstract truth, that "the knowledge of wickedness is not wisdom"; and yet, for the correct interpretation of diseases, we must intrepidly search out the causes, whether moral or physical, however loathsome or impure they may be. Early in the practice of your profession, you will, I am sorry to say, find out that many of your patients, who should be the heads of large families, are practicing detestable arts to avoid offspring. You will, on the other hand, be approached, perhaps indeed be hard pressed, by husbands, and for the matter of that by wives also, for some method of congress unattended with the risk of impregnation. You will also be consulted for the mental and bodily infirmities resulting from these and other sexual sins. You must not, therefore, go out into the world ignorant of these evils, and consequently incompetent to grapple with them. It is, however, so hard a task to discuss such subjects in acceptable language, that I confess to some squeamishness, and would much rather refer you to suitable text books, were there any. But, unfortunately, there are none on these subjects, although our land is flooded with a prurient literature treating of the conjugal relations. Impudent quacks and men of battered reputations must not be your guides; far better it is for you to learn a new thrust of fence from a friendly foil, than from the stab of a foe. * * * *

You have all had a religious training, and respect the teachings of the Bible; let us see what light they throw upon the conjugal relation. The first words addressed by God to our first parents conveyed the following blessing and command: "And God blessed them, and God said unto them, be fruitful, and multiply, and replenish the earth." The same blessing and the same command, in precisely the same words, were twice given to Noah. Abraham and Ishmael received the same blessing, and so did Isaac thrice in one chapter. Laban's household sent away their sister Rebekah with the same blessing. "Give me children, or else I die," was the cry of Rachel. Jacob called his offspring "the children which God hath graciously given thy servant;" and the same patriarch, when dying, raised himself upon his staff in order with greater solemnity

to invoke upon his beloved son Joseph "blessings of the breasts and of the womb." The Psalmist declares that "children are an heritage of the Lord: and the fruit of the womb is his reward;" while the curse pronounced upon idolaters by an indignant prophet is, "Give them a miscarrying womb and dry breasts." In Exodus we read that if a man "take him another wife, her food, her raiment, and her duty of marriage shall he not diminish." Throughout the old Testament you will find that fruitfulness was regarded by Jew and Gentile as the greatest of earthly blessings, and that as such it was the reward of the righteous, and as such it was withheld from the wicked. How a profanation of this blessing was regarded by God, you all know from a history of Onan, who was slain for disobeying a divine command by resorting to one of the "preventive measures" in vogue at the present day. Again, in the New Testament, we find St. Paul giving the following advice to the married Christians at Corinth: "Defraud ye not one the other * * * that Satan tempt you not for your incontinency. Let the husband render unto the wife due benevolence; and likewise also the wife unto the husband," etc. * * * The sexual instinct has been given to man for the perpetuation of his species; but, in order to refine this gift and to set limits to its abuse, it has been wisely ordered that a purely intellectual quality—that of love—should find its most passionate expression in the gratification of this instinct. Dissociate the one from the other and man sinks below the level of the brute. Destroy the reciprocity of the union, and marriage is no longer an equal partnership, but a sensual usurpation on the one side and a loathing submission on the other. Consider the moral effects of such shameful manœuvres; wedlock lapses into licentiousness; the wife is degraded into a mistress; love and affection change into aversion and hate. Without suffering some penalty man cannot disturb the conditions of his well-being or trespass beyond its limitations. Let him traverse her physical laws, and Nature exacts a forfeit; dare he violate his moral obligations, an offended Deity stands ready to avenge them. The husband suffers mentally, because no *man* can behave in so unmanly a way without a keen sense of self-abasement, without being stung by the chastisement of remorse. Dishonor the body, the temple of the soul, and you dishonor the soul. Again, by this cowardly recoil, his enjoyment in the act is so blunted that he is tempted to seek elsewhere for those pleasures which are denied him at home. Further, he suffers physically, because, although he passes through the crisis of the sexual act and completes it in that sense, yet, owing to his withdrawal from the person of his wife just before the moment of ejaculation, this acme of the orgasm, by the lack of the normal and needful adjuvant—viz., the rugous and constringing vagina—is not sufficiently prolonged to wholly empty the *vasa deferentia*. Enough of the semen remains behind to tease his organs and to kindle in him desires too importunate to tolerate any great

self-control. He is thus goaded on to such sexual excesses as no brain nor brawn can long support; for a constant drain in the life-giving fluid implies a constant expenditure of nerve-force. Early exhaustion and premature decrepitude will inevitably ensue if this practice of "conjugal onanism" is persisted in. Nor is this name a misnomer; for there is no essential difference between this habit and that of masturbation. * * The wife suffers the most, because she both sins and is sinned against. She sins, because she shirks those responsibilities for which she was created. She is sinned against, because she is defrauded of her rights. Lawful congress completely performed so far satisfies an important instinct; that attendant local congestions are at once relieved, and to great nervous excitement succeed a calm repose of body and mind. On the other hand, conjugal onanism provokes in her desires which keenly solicit that very gratification which is denied by the nature of the act. The excessive stimulation of the whole reproductive apparatus remains unappeased. A nervous super-excitation continues, which keeps up a sexual excitement and a hyperæsthesia of the parts. By forfeiting her conjugal rights she does not reach that timely conjuncture which loosens the tension of the connective muscles of her erectile tissues. Hence, the congestive orgasm of the vagina, womb, oviducts, and of the ovaries, does not at once pass away, but persists for some time—perhaps is not wholly effaced before another incomplete coition brings a fresh installment. Thus arise engorgements, erosions, and displacements of the womb, and inflammation of its appendages, accompanied, of course, by all those protean mental and physical manifestations which I have so often pointed out to you. She takes distorted views of life and of the marriage relation, and harbors resentment against her husband as the author of all her ills. * * * Again, for the ill effects of such practices accumulate, the very barrenness aimed at by these criminal expedients is in itself a source of disease. In sterile women the absence of pregnancy and of suckling prevents a break in the constantly recurring catamenia and the physiological congestions of the womb, augmented by the sexual congestions, are, by ceaseless repetition, liable to become pathological. Add to this the unrelieved congestions arising from incomplete intercourse, and a prolific source of uterine and of hepatic disorders is at once manifest.

But to return from a digression, there are other artifices—nay, even equipments borrowed from the brothel—for the purpose of avoiding conception, which may well alarm publicists and statesmen. For, vile as they are, they have received the open sanction of those English political economists, who forget that crime and vice and human suffering in their land are due less to "over-population and large families" than to absenteeism, to the laws of primogeniture and of entail, to the grasping avarice of the rich, and to the intemperance, ignorance, and shiftlessness

of the poor. All these expedients operate by directly preventing the access of the spermatozoa to the uterine cavity, by destroying them, or by washing them away; but they are all hurtful equally to mind and to body. If it is hazardous for an over-heated stomach to receive a glass of water, its natural and accustomed beverage, how much more will it be to deluge the over-congested womb with such foreign fluids as simple or astringent injections. On the other hand, those mechanical contrivances for limiting the range of the spermatozoa so blunt the pleasure as to lead to unfaithfulness or to their disuse. Moreover, in common with other teachers, I am old-fashioned enough to believe that pregnancy is a needful condition to healthful and happy marriages, and further, that coition is innocuous only when complete in both husband and wife, and when the germinal fluid bathes her reproductive organs.

In a late discussion before the British Medical Association, in which some of the foremost men in England took part, it was the unanimous verdict that over-breeding does not produce ill-health so much as efforts to prevent conception. The venerable West accuses "the imperfect performance" of sexual intercourse as one of the frequent causes of uterine engorgement and of hypertrophy of the cervix." I am glad to give prominence to these brave words of an able man. The time has come, and now is, when the honest practitioner must tear aside that veil of false modesty, which hid a multitude of criminal practices, and disclose the evils, physical and moral, that obtain among the married."

In a recent address ("Dangers and Duties of the Home"), Dr. Goodell reiterates the statements of his text-book, and with great force argues against this constantly increasing evil. The note of alarm has been sounded and its echoes find their way into the waiting-room of every gynecologist, and into the library of every political economist. How shall we combat the enemy? What preventive measures shall we make use of? Two lessons we must teach, whenever and wherever opportunity shall offer. First, we must urge a disseminated knowledge of sexual hygiene and of the physiology of the sexal apparatus among women; and secondly, we must discountenance all of those ambitious out-reachings of the modern woman, which unfit her for her duties as wife and mother. The intense asceticism in the present system of education among women, together with the social demands which the civilization of our day makes it incumbent upon womanhood to observe, are primary factors of evil. There are three orders in the life of a woman, into one of which she is ambitious of becoming enrolled. The school of letters; the school of politics; the school of society. The brain of the girl is developed at the expense of her body. She is crammed with studies that consume the time which should be given to exercise, or to repose. Arriving at the age of puberty, with no well defined knowledge of her physiological relations, she becomes afflicted with tormenting, vicarious sensations,

which she can assign to no cause, and which she can neither understand nor describe. There may and often will arise an errotic neurosis, a reflex paralysis, or a neurasthenia, which is perfectly natural and entirely consonant with the most absolute purity of thought, word and deed, and which is due either to a uterine engorgement or to the influence of mental states of prolonged contemplation, which proper instruction in regard to her sexuality would have rendered impossible. With an overmastering ambition to excel, or to rival her collegiate brothers, she bends every energy to the mastery of philosophy, mathematics and the classics. She attends irregularly to the calls of Nature; she eats sparingly; and at odd hours; she spends in her study, or in a school-room, the larger part of the time, which should be devoted to muscular, out-of-door exercise. Her catamenial periods are attended with backache, headache and general malaise, but she toils on, failing to recognize the significance of the event, because she has never been instructed about it. She graduates with high honors, her friends flock around to congratulate her, she is recognized as an authority in the realm of letters, but she is physically a wreck. She marries and is sterile, either from a dyspareunia, which makes coitis painful, or from chronic uterine inflammation with displacement, or else from self-caused conditions. Children would interfere with her studies, with her correspondence, or with her social engagements. As age creeps on, and the pleasures of her youth fail to satisfy, the desire of motherhood becomes strong within her, and she realizes, too late, the affliction of being childless. She has engendered a condition which the gynecologist is powerless to remedy. It is, generally speaking, utterly impossible for a woman to be strong and well, and be the happy mother of healthy children, who has been forced from her early youth as plants are forced in hot houses. The present system of girl cramming and college forcing of women is accountable for much of the sterility and of the physical degeneracy of American womanhood. The mind and the body must advance equally. The one cannot be developed, in any healthy ratio, at the expense of the other. Girlhood is a preparatory school of puberty. If the woman would be strong and buxom, the girl should be trained in habits of observance. Such is the relation of the uterine plexus of nerves with the cerebro-spinal axis, that as one suffers so will the other. The uterine function cannot be properly performed if the brain be actively engaged throughout the waking hours. Disorders of menstruation are so common among school teachers and school girls that to find one whose functions are normally performed seems to be the exception. If early education should impress upon the girl that physical health was a prize above all others, that to be the contented mother of noble children was the brightest jewel in the crown of noble womanhood, and that she best fulfilled God's intended work by learning to be honest and faithful in all the relations of life, there would be fewer wails from

sterile mothers, fewer moans from suffering women. Instead of living in "the midst of simple meanings and pure beliefs," the school girl is surrounded by exaggerations that work her ruin. I have never joined in the popular cry for the higher education of women, if, by that, forced development was intended. The highest education possible to any woman is the recognition of her physiology, and of its purposes and demands, her highest duty "to walk worthily in the station of life to which it has pleased God to call her." As we go back to the simpler states of life in the history of civilized nations, we find lessons in the theory and practice of education which our over-ripe civilization cannot give us. In the whole round of moral, social, artistic, physical, intellectual and political training the Greeks were far ahead of us, though possessing few aids in human progress, Greek education had its ideal and its practical side, the one represented by Plato, the other by Aristotle; the practical Roman education was well illustrated by the theoretical writers of its earlier stages, Cato, the Censor, and Cicero, and later by Quintillian. During the lives of these expounders, to be a childless woman was a disgrace, and it was not the decadence that arts and practices came into use, which it is a shame even to mention. John Sturm, of Strasburg, first systematized the curriculum of humanistic education, as opposed to the idealistic and naturalistic. But the plain, unadorned system of John Sturm does not satisfy the present female craving. She reaches out for political recognition. The great unrest of her soul, which feeds without satiety upon an unsatisfied ambition, will find shelter and rest only in an equality, before the law, of both sexes. Ethically, I see no reason why she should not be so recognized, if it will add to her comfort, neither am I opposed to her entering the learned professions. I look upon all such questions as manifestations of an unhealthy civilization, that creates sporadic cases of nervous excitement. But a woman whose mind is thoroughly imbued with these ideas of suffrage, and other matters of similar nature, takes away from her home the companionship and feminine graces that made life sweet to all around her, and becomes, in a certain sense, unsexed in relation to her characteristic sentiments. She unfits herself for motherhood, either from a distaste to accept its responsibilities, or from physical causes wrought by the excitement of her life. Or, if she tend neither to literature nor to politics, she perhaps aspires to social leadership. Nothing so unfits one for the sweet, restful, soul-satisfying home life as the constant whirl of excitement in which a society leader is forced to live. The round of gayety that meets her at every turn is a physical drain which few women can stand. The late hours, the style of dress, the condition of the drama, the freedom of intercourse between the sexes, which delights in the immodest double entendre, the suggestiveness of the dance, and the highly seasoned condiments of the table, maintain a persistent state of

uterine erythism, that, even in legitimate congress, refuses to satisfy itself thoroughly, fearing impregnation. Such an one will often plead the expense of rearing a large family, saying that she and her husband have only enough in the bank to maintain themselves respectably, or else she does not care to be curtailed in her pleasures by the cares of motherhood, but will await a more convenient season. Such social dissipation, which is the outcome of the civilized license of this decade, creates an intense but always ungratified errotic sense that leads to practices and perverted sexual relations that may not be named. Relief, that entails no subsequent possibility of child-bearing, is sought in ways that are ruinous to good health and to good morals. Legitimate congress is rarely resorted to, and there be many cases of record among our gynecologists where the most repulsive and unnatural practices have been indulged in between man and wife, and others in which masturbation has been freely practiced. This habit of self-abuse being frequently resorted to by two women at the same time. I believe that such instances are largely due to a feverish, over-wrought and highly exciting civilization. A civilization that in every way tends to create ovarian irritation and to force a woman into the constant contemplation of unhealthy subjects. This conjugal onanism then, is due, so far as civilization and society are concerned: 1st. To a false system of education, which develops the brain at the expense of the body. 2d. To the restless condition of our women, engendered by education and by the constant social vagaries of the day. 3d. By the expensive tastes and habits of our people. 4th. By the excesses of everyday life which tend to create irritation in the sexual apparatus. 5th. By subjective states of consciousness. In the heyday of youth, when a future expands before the restless gaze of young womanhood, with its possibilities of greatness, or with the alluring conquests of social leadership, artificial means are made use of in the limitation of offspring which create a *habit* of sterility. When satiety creeps in with the cup of pleasure that has been drained to the dregs, or when an awakening sense of the unreality and unsatisfying conditions of her life, begin to arouse the true feminine cravings within her, the desire of offspring fills her being with an all pervading, all powerful force. The worst of all dooms is a "remorse that comes too late." She has made herself a childless woman and she must abide the result. The inherent possibility of a woman achieving mental distinction is not a point in argument. Granted the same privileges, the same training, and urged on by the same necessity of self-support, I can see no reason why she should not be a worthy competitor in the race. Such a possibility could not be immediate, but would be the final consummation of years of persistent endeavor in this direction. It would result from the transmitted influence of heredity, which would become stronger with each generation. Such a state of things, however,

would not be consonant with the proper performance of her characteristic functions, and would, in time, unfit her for the very duties that of right belong to her. There must be physiological periods of rest. No woman can safely ignore the regular occurrence of the catamenia. With active ovulation and consequent uterine congestion, with the whole cerebro-spinal axis participating in the event, there are withdrawn from brain-power certain conditions of concentration and abstraction which are pre-requisites of its perfect action. Indiscretions committed upon such occasions are always followed, sooner or later, by physical aches and pains. An active brain, in a body racked with suffering, feeds upon itself, and exhausts the brawn and muscle in the vain endeavor to keep pace with it. It is not a question of mental capacity, but of physical ability. Through successive œons of time evolution might accomplish a woman who would be such only in a time-honored reverence for the name. It could only do so at the expense of her child-bearing function. Sterility has an especial significance, not merely for the gynecologists, but for all men interested in education and in the perpetuation and elevation of the human race.

A monograph by Col. Higginson, of Boston, and an article from the able pen of Dr. Mary Putnam Jacobi, in the *North American Review*, for January, 1882, are arguments which are to be welcomed as emanating from recognized intelligence. They deal chiefly with the mental ability of women to fill masculine vocations, professional, political and clerical. Dr. Jacobi is occupied with the statistics of success of female practitioners, while Col. Higginson strives to cover the whole field, even including physiology. The latter is strangely silent upon the ultimate effects of mental states of intense abstraction, upon the physical condition of generations yet unborn. He forgets to allude to certain possible uterine affections which are engendered by unusual mental efforts. He states objective physiological facts, but ignores the subjective processes of pathological conditions. He argues from present premises, forgetting what changes would result in the lapse of years. The question is not associated so much with woman as she now is, but with the effect that these contemplated innovations might have upon posterity. Let it be granted that woman is, in every particular, able to keep pace with man in the various learned and clerical vocations, a fact, which, parenthetically, it may be said, could not be possible without reform in social institutions, and until years of experience and discipline had accustomed society to the new order of things; the question is yet unanswered as to whether she would be benefitted by the change. Let it be granted, further, that there is no essential difference between the cerebral development of men and women, we are still confronted with the problem of her physiological ability to assume such callings of mental activity with safety to her intended sphere of motherhood. It might also admit of argument

as to which more fully met the requirements of a perfect woman—she who had grappled with political economy, had mastered its intricacies, and had reached the full fruition of her aspirations as a leader among her sex; or the refined, cultivated and devoted wife, who gave herself entirely to the education of a whole progeny, and to the more perfect education of herself, as a true help-meet to her husband—who, in after years, might live anew in the young life of her children, and who in the sunset of ripe old age, should live to see them honorable and honored. Restless activity, a dissatisfaction with her duties and calling, and a want of reverence for her special vocation, go hand in hand with sterility. Apart from these considerations of the influence of education and society, there are causes, inherent in the woman, moral states of consciousness, which exert a powerful control upon the uterine function, and which may engender sterility in a woman who, under other circumstances, would be fertile.

Plato said that there is no natural difference between the sexes, except in strength, and that they should both equally participate in the government of the state.

Earl Russell, in "The English Government and Constitution," says: "We could easily prove the very extraordinary capacity of women for politics. We would be willing to stake the whole controversy on that single issue. Without going as far back as Zenobia, we might adduce a long list of woman, who, in every age and country, have had a large, often a pre-eminent, influence in natural progress; and an influence not arising out of intrigue, but entirely from political capacity. (Quoted by Charles Anthony, Jr., in the "Social and Political Dependence of Women.")

The argument based upon the incompatibility of active life with maternity and the cares of a household is thus answered by Mrs. Mills: "The maternity argument is usually laid most stress upon; although, it need hardly be said, this reason, if it be one, can apply only to mothers. It is neither necessary nor just to make imperative on women that they shall be either mothers or nothing; or that, if they have been mothers once, they shall be nothing else during the whole remainder of their lives. Neither women nor men need any law to exclude them from an occupation if they have undertaken another which is incompatible with it. No one proposes to exclude the male sex from parliament because a man may be a soldier or sailor in active service, or a merchant who requires all his time and energies. Nine-tenths of the occupations of men exclude them *de facto* from public life as effectually as if they were excluded by law; but that is no reason for making laws to exclude even the nine-tenths, much less the remaining tenth. The reason of the case is the same for woman as for man. There is no occasion to make provision by law that a woman shall not carry on the active details of a

household, or of the education of children, and at the same time practice a profession, or be elected to parliament. Where incompatibility is real, it will take care of itself; but there is a gross injustice in making the incompatibility a pretence for the exclusion of those in whose case it does not exist. And these, if they were free to choose, would be a very large proportion. The maternity argument deserts its supporters in the case of single women, a large and increasing class of the population; a fact which, it is not irrelevant to remark, by tending to diminish the excessive competition of members, is calculated to assist greatly the prosperity of all. There is no inherent reason or necessity that all women should voluntarily choose to devote their lives to one animal function and its consequences. Numbers of women are wives and mothers only because there is no other career open to them, no other occupation for their feelings and activities."

In a number of the *Edinburgh Review* Sydney Smith argues that the fact of a woman's inferiority is the mere *ipsi diximus* of men. Demosthenes said that many a woman had overturned in a day the year's work of a statesman. Montesquieu said that a government should be judged, not by the men at the head of affairs, but by the women who sway the men. Clement XIV. said that husbands have often received the credit and honor due to the sagacity of their wives, and Madame de Stael writes: "Trop de puissance déprave la beuté, altère teutes les jouissances de la délicatess; les vertus et les centimens ne peurent résister d'une part à l'exercise du pouvoir, de l'antre à l'habitude de la crainte."

The *onus probandi* always rests with the objectors, and it seems to me that these arguments, if such they may be called, statements would be more correct, have no conceivable bearing upon the question at issue.

Mrs. Mill has "the courage of her opinions," including, as it has been said in the *Saturday Review*, several opinions beside the dogma of indiscriminate suffrage. The abstract right of woman to equal suffrage with men may be granted, but it is another matter to concede that the woman would add to her sovereignty, or that the society of the future would gain by the change. Mrs. Mills' argument is a *non sequitur*, because she leaves the question of physiological fitness undiscussed. She thinks that Nature will take care of "incompatibilities," forgetting that the hope of future generations rests in the "incompatibles" for life and usefulness. The naked truth of equal suffrage exists as an ideal right, but to fix it upon any imperishable or active basis it must be proven that the sexuality of woman would not suffer in the change, that there would be no upheaval of approved social and moral ordinances, and that a gradual change from fecundity to sterility would not be engendered. As physicians, while conceding the abstract right of social and political equality, we cannot forget the unsurmountable physiological objections, present and future, which would render the universal practice

of suffrage impossible in the present order of society, with the present physical status of women and with our present ideas of morality. Had Nature so ordained through the ages that are past, that the child-bearing function should be a part of a man's usefulness, and that a woman should govern as now her husband does, the whole sisterhood would probably rebel and cry for a change. The effect upon the child-bearing function of a life spent in active political excitement is very evident. I believe that a woman should have the control of her own estate, that she should be allowed to enter the learned professions or mercantile life, and even to vote if so she desires, but I also know that the feverish condition so engendered in many women entirely unfits them for their duties as loyal mothers, that it is a frequent source of deranged menstrual function and a fecund cause of sterility. It is not a question of woman's inferiority or man's superiority, but one of fitness. The question in relation to woman and in relation to ages yet unborn is a physiological one. No argument can possibly stand which is purely ethical.

"Sexual gratification is not necessary to conception; neither does its absence preclude conception. The essential condition is that the fertilizing element should have ready entrance to the cervix uteri at the right time."—(Barnes, Diseases of Women.)

Mental rest is absolutely necessary in many women to perfect ovulation. Neurasthenic women rarely, if ever, menstruate properly, when worried or over anxious about domestic affairs. Just what impress is stamped upon the catamenial function by these subjective mental conditions it is impossible to define. The influence is powerful and dominant. A woman, married twice to men of equal vitality, will conceive by the one and be sterile by the other. The marriage de convenance, in which love is sacrificed to worldly considerations, is very apt to be barren of issue. The young woman, into whose early life there entered a romance, which she idealized with all the fervor and imagination of her nature, whose hero worship was a sublime consecration, if death shall rob her of the object of her love, or if unkind fickleness shall turn his attention in another direction, will carry through life a certain indelible impress which will exercise sway over her whole future. She marries in time, and, although her husband may be in every way worthy of her affection, yet there is something lacking. His embraces are intolerable. The spectre of her early love haunts her, and despite her desire of motherhood, she is sterile. Just how such incompatibility of sentiment induces sterility I do not know. That it very often does have this effect no experienced gynecologist will deny. If the ovum contain within itself the millions of germules, representing the transmitted characteristics of ancestry, as well as the maternal impressions, it is possible that the mental aversion of the mother will make so positive an impression upon a certain group of germules, that, necessarily, failing to fasten upon

affinities, they will prevent potentiality in the others. There is a very intimate relation between the brain and the sexual apparatus. As one suffers so will the other. Insanity is often due to a uterine displacement. The psychic phenomena of sterility are of extreme interest.

"Marriages with a sister or a deceased wife's brother were not uncommon among the Egyptians. This is confirmed by numerous testimonies: Diod. 1.27, Cod., Justin V., Tit. V., Leg. VIII.; also by Greek writers, Cor. Ness., I., V., Cim. I. The history of the Ptolemies, and especially of Philadelphus, is full of examples of such marriages. [Ebers.] Dr. Barnes ("Diseases of Women") says: "Certain degrees of affinity seem to be unfavorable to fertility. Upon this subject Francis Galton has adduced many most interesting and valuable historical and statistical illustrations. Thus, he shows in his book on "Hereditary Genius," how evil is the influence of consanguineous marriages. Mr. Galton shows the bad influence of marriages with "heiresses." Heiresses are presumptively single children, the feeble fruit of worn-out stock. Many peerages have become extinct through this. One-fifth of the heiresses have no male children at all, a full third have not more than one child, three-fifths have not more than two. It has been the salvation of many families that the husband outlived the heiress whom he first married and was able to have issue by a second wife. "I look," says Galton, "upon the peerage as a disastrous institution, owing to its destructive effects upon our valuable races." The researches of Galton are confirmed by those of Sir J. Simpson on the fertility of the peerage. Thus Sir James found that out of 495 marriages in the British peerage 81 were without issue, giving 1 in 6 as the proportion of sterile marriages; whilst 675 marriages in the villages of Grangemouth and Bathgate, one being agricultural and the other sea-faring, gave 65 sterile, or about 1 in 10. The available materials for estimating the proportion of sterile women are very scanty, so much so that no precise deductions can safely be drawn from them. Indeed, here, as in so many other cases where the phenomena of life are concerned, the complicating conditions, and therefore the sources of fallacy, are so numerous that it is almost impossible to isolate the bare fact of sterility, the word being taken to imply incapacity, absolute or temporary, to bear children in any considerable number of instances, so as to make up a statistical column, all the constituent elements of which shall have equal value. Under the usual statistical process there remains nothing but a *caput mortuum*, from which all the facts, all the truth, have been sublimed away. As a matter of general political interest, however, it may be stated that Dr. Farr calculates the mean fruitfulness of marriages in England in ordinary periods to be in every 100 marriages 420 children, giving an average of $4\frac{2}{10}$ children to every marriage."

"The question of a woman's being probably sterile is decided within

the first three years of her married life. Only seven per cent. of the fertile bear first children after three years of marriage, or about one in fourteen. A certain number of women in every community will be found to be sterile. * * It has been computed that in Great Britain alone there are over 500,000 married females sterile, and, as Dr. Bennet remarks, it is difficult to believe that mere physiological or pathological deficiencies, either on the female or male side, of a function which lasts during the greater part of our existence, can satisfactorily account for such a result."

"Sterility does not necessarily prove that the sexual organs or functions in either the male or the female must be in an abnormal condition. There may be a physiological incompatibility, a relative not an actual sterility, as proved by husband and wife living together for many years without having any family, and without apparently any alteration in the condition pregnancy ensues. Again, a wife remains sterile with one husband who has had children by his former wife, and yet conceives at once on marrying again after the death of her first husband. Instances are not unknown of man and wife living together for years, having no family, being divorced, marrying again and having families without apparent change in their health, before or after the divorce."—Edis, Diseases of Women.

The reports of the last United States Census give no statistics of consanguineous marriages, but from private sources I have received details of one hundred and twenty-five cases, as follows:

Marriage of first cousins, 100; sterile, 60; one child, 40; two children, 20; three children, 5.

Marriage with deceased wife's sister, 15; sterile, 7; one or more children, 8. Marriage of second cousins, 10; all fruitful.

Marrying in unbroken lines of descent is equally productive of sterility. Hereditary traits of ancestry and physical characteristics are transmitted through generations, but just what physiological processes are involved in the decrease of offspring consequent upon consanguineous unions it is almost impossible to define. Diseases which have marked successive generations become intensified by inter-marriages, and in this way may influence a woman's productiveness, just as they may also affect the vitality of the man. The habit of sterility may thus be transmitted, the number of children resulting from each blood marriage becoming less with each generation. In the Jewish race, where marriages among relatives are frequent, the transmission of the race traits is quite startling. Yet the assertion that such inter-marriages engender a sterile condition seems to be somewhat weakened by a study of their history. The *New England Medical Monthly*, quoting from the *Revue Scientifique*, says: "The Jews nearly everywhere enjoy certain physiological immunities which distinguish them from the other inhabitants, among which are the

following: Their general fecundity (proportion of births to the whole number) is less, while the relative fruitfulness of their marriages to those of other races varies in different places; a greater proportion of their children survive everywhere; illegitimate births and still-born children are more rare among them; the proportion of males to females among the births is greater; their mortality is lighter, the mean duration of life is greater; they increase more rapidly by the excess of births over deaths; while they do not escape them entirely, they are less generally and less severely afflicted by contagious diseases; they are comparatively exempt from such diseases as consumption and scrofula, and they have the faculty of becoming acclimated and multiplying in all latitudes. These immunities are observed, notwithstanding the apparent condition of the Jews who may enjoy them may be most miserable; notwithstanding the frequency of marriages of relatives among them; and notwithstanding the unwholesome conditions of the city life to which they mostly confine themselves. They may be explained as the consequence of the operation of a variety of causes, among which are suggested an inherent superior vitality in the race, the continued preservation of its purity from mixture with foreign blood, the faithful observance of the rules of hygiene laid down in Deuteronomy, which are particularly adapted to hot climates and hot seasons; the salutary influence of early marriages, of the spirit of order and economy, of moderation in tastes, of comparative severity of manners, and of the domesticity of Jewish family life. It may be, too, that the misery in the Jewish quarters of European cities is more apparent than real, and that their inhabitants are really better off than the people around them. The facts are brought out in statistics, from which these conclusions are drawn, that Jews are quite liable to cerebral affections, and also to diseases that afflict mature and aged persons."

In discussing the principle of the law of deviation from an average, Francis Galton observes: "Every variable event depends on a number of variable causes, and each of these, owing to the very fact of its variability, depends upon other variables, and so on, step after step, till one knows not where to stop. Also, by the very fact of each of these causes being a variable event, it has a mean value, and, therefore, it is an even chance in any case, that the event should be greater or less than the mean."

Pangenesis supposes that the gemmules, whence every cell of every organism is developed, are derived from two causes: the one, unchanged inheritance; the other, changed inheritance. Galton takes for example the case of a child who acquired one-tenth of his nature from individual variation and inherited the remaining nine-tenths from his parents. It follows that his two parents would have handed down only nine-tenths of nine-tenths, or $\frac{81}{100}$ from his grandparents, $\frac{729}{1000}$ from his great grandparents, and so on; the numerator of the fraction increasing in each

successive step, less rapidly than the denominator, until we arrive at a vanishing value of the fraction. The part inherited by this child in an unchanged form, from all his ancestors above the fiftieth degree, would be only one five-thousandth of his whole nature.

In discussing what is to be understood by the phrase "individuality," I may be allowed a final quotation from "Hereditary Genius": "The artificial breeding of fish has been the subject of so many books, shows, and lectures, that every one has become more or less familiar with its processes. The milt taken from the male is allowed to fall upon the ova that have been deposited by the female, which thereupon rapidly change their appearance, and gradually, without any other agency, an embryo fish may be observed to develop itself inside each of them. The ova may have been separated for many days from the female, the milt for many hours from the male. They are, therefore, entirely detached portions of organized matter, leading their own separate organic existencies; and at the instant or very shortly after they touch, the foundations are laid of an individual life. But where was that life during the long interval of separation of the milt and roe from the parent fish? If these substances were possessed of conscious lives in the interim, then two lives will have been merged into one "individuality" by the process; which is a direct contradiction in terms. If neither had conscious lives, then consciousness was produced by an operation as much under human control as anything can be. It may not be said that the ovum was always alive, and the milt had merely an accessory influence, because the young fish inherits its character from its parents equally, and there is an abundance of other physiological data to disprove the idea. Therefore, so far as fish are concerned, the creation of a new life is as unrestrictedly within the compass of human power, as the creation of any material product whatever, from the combination of given elements. * * * Therefore not only the creation of the lives of fish, in a general sense, but also the specific character of the individual lives, within wide limits, is unrestrictedly under human control."

Humanity has, of course, a large control over its own actions, it may multiply itself by early marriages, or annihilate itself by celibacy. Given the principles out of which life or consciousness emanates man can create, in a purely mechanical way, by the mere juxtaposition of elements. But he is entirely ignorant of the chemico-molecular action of the germules—or in other words of the force that such contact sets free. He cannot, artificially, create the milt and the roe. Neither can he explain the action of the one upon the other. It is probable that each possesses within itself certain equivalents of life, representing the equivalents of unchanged ancestral inheritance, and the modifications of this inheritance by the circumstances of change, decay, climate, etc., of both parents, and that upon a union of the two, a force is originated of which we can

never, by reason of the finite nature of our understanding, know anything. The fecundity of the Jewish race is merely a relative fact. It exists only when compared with the number of deaths and with the population. This fecundity would probably increase by the intermarriages with other races, and, with such admixture of a new element, new traits of character would develop. It is a very easy problem to solve of a sterility engendered by marrying in "unbroken lines of descent." Customs, habits, and modes of life that tend to physical weakness, or to the practice of unlawful marital habits, are perpetuated, and through successive generations, the power of child-bearing becomes weakened. The gemmules, diseased by vicious habits of ancestral inheritance, are further weakened by the extraneous conditions of an overwrought civilization. They need new life, new blood, new vigor, to make them active. Early marriages are a great safeguard against sterility. The extravagancies of the present age, the social demands made upon our women, and the generally feverish condition of our times, debar men, not born to opulence, from shouldering such a responsibility. Even men with fair salaries fear to link the future of a woman, whose early life has been surrounded with all the luxuries that wealth can buy, with a condition much below that to which she has been accustomed. The cost of living, as compared with the rate of wages, may not be really greater than that which obtained among our ancestry, but the supposed necessities are infinitely more numerous. Appreciating the power of money, the present generation does not comprehend its value, and will not exercise the self-sacrifice and personal economy which would render a comfortable home consistent with an average salary. So young men await a more convenient season, a season oftentimes purely ideal, in which a large income shall clothe a prospective wife in royal purple and costly silk. Middle life still finds them plodding along the uphill road to fortune, with bodies weakened by physical excesses and by mental agitation. They marry women oftentimes equally disqualified for healthy motherhood by social dissipation, and the result is natural—limited and unhealthy offspring. There is a healthy restraint in an early marriage which keeps a man pure from sensual indulgence and inspires the woman with more refined, more healthy and more ennobling views of life.

Such seem to me to be the moral factors at work in society, by which the human race may be decimated, if better views and nobler practices do not gain the ascendancy. The state is the mere expression of an aggregation of individuals. The stability of the state will depend upon the individual integrity. The stability of all states—that is of the whole race—rests ultimately in the honesty of the individual. We either aid a much needed reformation by well directed effort, or we retard it by our silence. Reformations are the final expressions of the majority against abuses, but the abuses must be so pronounced that

each individual must groan beneath the burden, before such a general upheaval will arise. I am aware that my views upon certain of the economic and political problems of the day, closely related to this subject, are evidently divergent from those of some men and women who have written largely and with ability upon the need of reform in those matters affecting the suffrage of women. He who would deal honestly with this question must strip himself of personal bias, and be governed in his argument by every consideration entering into it. The physiological life of woman, her relation to society as wife and mother, the periodical drains made upon her system, her adaptability for certain pursuits, and the effect which such suffrage would entail upon future generations, are matters of the very greatest importance. What was the intent primarily, of her distinct and characteristic fashioning? Not every woman, as Mrs. Mills observes, is born to be a mother, but in each female heart the maternal love reigns supreme, and she that is childless does not exemplify in herself the entire possibility of her sex. Despite herself she will go through life with a sense of something wanting.

The mere fact of granting a woman the right to vote bears in itself no serious cause for alarm, and may be safely allowed. In its social relations however, and in view of the ultimate effect that it might have upon a woman's nature, and upon her especial prerogative, it wears quite another aspect. The influences of mind upon body is so powerful that mental states of consciousness are often controlling factors in pregnation.

In striving to account for some conditions of sterility, I have referred to the theory of Pangenesis. The cause of all psychological heredity is physiological heredity. Having no absolute explanation of this, in the present state of biology, we are reduced to hypotheses. Darwin says: "We must consider each living being as a microcosm made up of a multitude of organisms capable of self-reproduction, of inconceivable minuteness, and as numerous as the stars of Heaven." "Heredity," says Girou de Berzareingues, "may, even in animals, extend to the most whimsical peculiarities." The *gemeingefühl*, or the result of an infinite number of sensation, (cenethesis) proceeding from the nerve, muscles, circulation and nutrition, in short the universal consciousness of existence, is a transmission of heredity. Montaigne, himself, says that his antipathy to medicine was heredity. Many strange conditions and propensities may be referred to the unconscious mode, which underlie all consciousness and all thought. But, as Ribot says, these internal states are of so indeterminate a character that it is almost impossible to prove their transmission "when from the organic sensations diffused over the whole body, we pass to the wants and inclinations which have their seat in a special organ it is easy to give indisputible instances of passions hereditarily transmitted." (Ribot.) "The cause of heredity," says Häckel, "is the partial identity of the materials which constitute the organism of the

parent child, and the division of this substance at the time of reproduction." Transmission may take place without development, as in the cases of atavism and reversional heredity, and these instances are well explained by Darwin's hypothesis. Gemmules are transmitted to the second generation and preserved there, which are developed only in the third, or to use Darwin's own words: "According to our view, we need only suppose that certain cells came to be modified, as well in their structure as in their functions, and then they give out gemmules similarly modified." These gemmules are possessed of life, of force, and of tendency; they are transmitted by parents to their descendants, and usually develop in the generation immediately following, or they may be transmitted in a dormant state and develop at a later period. Having a mutual attraction for each other they aggregate into germs and sexual elements.

Over the question of consanguineous marriages there is an eager contest. They were condemned by the laws of Manu, the Mosaic code, the laws of Rome, the decrees of the christian councils, and the texts of the Koran. The ancient laws of Persians and Egyptians permitted the marriage of the nearest relatives. In Syria from the earliest times down to the end of the Seleucidae they were common. The customs of the Samocedes, Tartars, Caribs, the American Indians, etc., in one place allow such marriages and in another proscribe them. Darwin believes that the consequences of close interbreeding of animals, carried on for too long a time, are generally thought to be loss of size, of vigor and of *fertility*.

Prosper Lucas and Dr. Benlin condemn such marriages without reserve[1]. "History, says Lucas, "witnesses the disastrous consequences which it brings on man." "Aristocracies obliged to recruit their numbers from among themselves became extinct," wrote Niebuhr. "It would not perhaps be rash to see an effect of consanguinity in the premature decline of the Lagide and of the Seleucide. The Lagide from Ptolemy down to Cleopatra and Cesarion (323 till 30) reckon sixteen sovereigns, and the Seleucide, from Seleucus Nicator to Antiochus Asiaticus, (311 to 64) reckon twenty. They often married their sisters, their nieces or their aunts. Moreover, when the marriages were not consanguineous, alliances were formed between these two effete families. Now, it is certain that these races were in a state of perpetual decay, in proportion as they became more remote from their two or three first families." (Ribot).

To the reasons against consanguineous marriages only exceptional cases are opposed. Dr. Bourgeois wrote the history of his own family, which was the issue of a union in the third degree of consanguinity. In the course of one hundred and sixty years there were ninety-one marriages in that family, sixteen of them consanguineous, and yet there resulted neither infirmity nor sterility. Similar facts are cited by M. M. Voisin

1 Lucas, vol. ii. p. 903; Bulletins de la Societé d' anthro pologie, vols. i, iii. and iv. and vi.

and Dalby. There are two small French islands, Batz and Bréhat, in which consanguineous marriages are very frequent, yet the population is healthy and vigorous. M. deQuatrefages, in endeavoring to reconcile these two opinions, says; (Rapport sur les Progrés de l'Anthropologie, p. 461) "The consequences we are to draw from all these facts would appear to be, that near relationship between father and mother is not in itself hurtful, but that, in virtue of the laws governing heredity, it oftentimes becomes so; and hence, in view of the eventualities to which consanguinity leads, it is at least prudent to avoid consanguineous marriages." The questions of the hereditary transmission of sterility and of other characteristics; of the bearing upon sterility, of consanguineous marriages, and of the theory of Pangenesis, are so full of interest that it is difficult to keep within the proper limits of a general article. Each idea leads on to fresh theories, and these in all their ramifications, involves so many lateral studies, that a book might be filled with the discussion of heredity alone. I have but outlined a few directions of study which some one more competent than myself may be induced to elaborate.

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Foreign Gleanings.

TRANSLATIONS FROM THE FRENCH AND GERMAN.

[Prepared for the OBSTETRIC GAZETTE.]

LAPAROTOMY.—Prof. Billroth had two very interesting laparotomies last month. The first patient was a woman, about thirty years old, with a large uterine tumor. The abdominal incision exposed a growth of terrifying size. The adhesions were numerous and extensive, involving the ureters, contents of the abdomen and pelvis, omentum, etc. In separating these the bladder was torn in its upper portion. The portis vaginalis was ligatured, the tumor removed, and superficial and deep sutures put in. A drainage-tube was inserted and iodoform dressings used. The tumor weighed twenty-one kilo and the operation was one of the most difficult he ever executed. It was three hours long, there was a great loss of blood, and Prof. Billroth said the skillful assistants were to be thanked for her leaving the table alive.

The next day she was very comfortable, but the urine had diminished one-half and did not rise above that quantity. It was thought that the bladder suture had given way and its contents were being emptied into the abdomen, or there was present septic pyelitis. The post-mortem, five days later, showed a small amount of peritonitis, the bladder suture intact and no urine in the abdominal cavity; the right kidney much atrophied, the left dilated, and a pleurisy of the right side.

The second patient was a single woman of eighteen with an ovarian cyst. It was punctured and considerable fluid removed. The adhesions were insignificant, the pedicle was separated by the paquelin, the cavity sponged, the sutures placed and iodoform dressings used. Recovery. Prof. Billroth took occasion to mention the advantages of this dressing in most cases, especially in extirpation of the uterus. Cavities may be filled with iodoform gauze, and the dressings left undisturbed eight or ten days, without even an unpleasant odor. M. STANTON.

TREATMENT OF VAGINAL PROLAPSE.—Clinic of Prof. Breisky.—We find in this patient a complete prolapse of the vagina. On further examination a small round tumor may be felt, situated high in the abdomen, and sufficiently mobile to allow its being pushed into the region of the right hypochondrium.

We may have either an ovarian tumor with an extraordinarily long

pedicle, or a growth originating higher up in the kidney, which in this case would be swollen, fluctuating and changed in form. In order to prove that it comes from the kidney, we must be sure of no connection between it and the genitalia. It will then have no cord-like union between itself, the uterus or its appendages, and the ovaries will be found, by rectal palpation, to be in place. Even if we fail to discover this connection, the tumor may be a cystic outgrowth from the par-ovarium, although they are generally interligamentous. Schroder has mentioned observing cystic tumors with both ovaries intact. We must also consider whether the ovary may not be double upon one side, as described by Klebs and others, in which case one may have undergone cystic degeneration. It would then remain to be determined whether the tumor had a distinct pedicle-like union with the uterine appendage of one side, if it followed the movements of the uterus, or if it participated in them. Long pedicles are rare with small tumors, occasionally dermoid cysts are furnished with them, when a diagnosis of wandering kidney is often given. Rectal examination is difficult, because of its fullness and a stenosis resulting from former ulcerative process. Still the cord-like connection between the tumor and the genitalia may be felt. It gives her no trouble and may not for years. She seeks relief from the prolapses only.

The second patient is a thirty-eight year old primipara, who, after a difficult labor, shows a tumor about the size of my fist, which goes back when she is lying and becomes smaller after defecation. In the upper part of the right labium is a furuncle. The inner surface of the great and small labia to the clitoris are of a bluish gray color; the skin is glistening, dry, withered and relaxed, because its glands secretes neither oil nor moisture. There is also an xerosis of the vestibular region. This is in rare cases the point of origin of changes which may lead to atrophy and stenosis, to a perfect disappearance of the great and small labia, and to a perfect loss of the frenulum and præputium clitoridis, to stenosis of the vulva. The dry and brittle tissues tear easily, cohabitation becomes painful and mechanically difficult through shrinkage of the dry parts. Clinically these forms of dryness are to be distinguished from those left by chronic eczema in elderly persons. The uterus is low, the cervix directed forwards, the osteum wide, relaxed and deeply lacerated, the parts not ectropic, but hanging down, tongue-like, making the cervix appear thicker. The uterine body inclines to the left, the left ovary may be felt slightly enlarged and having on one side a spindle-shaped swelling the size of a date. The middle part of the vagina is folded, and, judging from appearances, we have a cystocele to deal with, the tumor disappearing on emptying the bladder. The fold in the vagina corresponds to that in the bladder, otherwise must the vaginal fold be solid hypertrophy, which condition is found when the prolapse remains without the vulva.

In this case the fold is neither toughened nor thickened and its surfaces have not the character of epidermis. Probably the urethra has bulged into the vesico-vaginal septum, which the catheter has proved to be the case. We have then prolapsus vaginum anterior, cystocele, depression and deviation of the uterus, hypertrophy of the portis vaginalis, and slight enlargement of the left ovary. The prolapse must be replaced. The measures for its retention may be palliative or radical. The latter to be preferred, especially with the working class. Many operative procedures have been tried and failed. Dieffenbach's method is not now used. Baker-Brown and other's operations has been modified by Frinke, but, in common, they narrow the vulva and lengthen the perineum. The results were bad. Later the operation was again taken up by Simon and Hegar in Germany and Lewis in America. Bischoff has a modification of his own. These operations may be combined in any case according to its needs. If the vaginal tissues are hypertrophied, there is a strong pressure and disturbance of the circulation after reposition. Just so when the uterine lips are hypertrophied, the weight of the organ is increased, as well as its tendency to press down, then the hypertrophied tissue should be removed, the cervix amputated and the hypertrophied fold removed by excision. This auxiliary operation is used for the relief of cystocele and prolapsus colli. Huguier's method of removing the supra-vaginal part is useful in cases of elongation. Neussbauer and Le Fort propose to unite the posterior and anterior vaginal walls. This prevents vaginal inversion and decreases the prolapse. Such a vagina would offer an impediment to cohabitation and childbirth. In elderly persons where these things may be left out it promises well. We will use it in our first case, as she has been operated on three times unsuccessfully.

The second case will be treated by excision of the posterior vaginal wall, with Emmet's operation for the cervix. M. STANTON.

Dilatation of the Uterus.—To dilate the uterus for diagnostic or therapeutic purposes Prof. Schultze uses a tannin-glycerine tampon, then his own laminaria tent, after which he washes out the cavity daily with from one to two liters of carbolized water. In catarrh and endometritis, without complications, good results are speedily obtained, and no unpleasant accidents need be apprehended. If endometritis is not benefitted, the uterus is dilated and any growths (granulation adenoma) are removed. The opening of the Fallopian tubes and boundaries of the fundus are favorite localities for little adenoma, that are often brushed over with the curette without removal unless the organ is well dilated.

M. STANTON.

Separation of Connected Twins.—The *Revue Médicalè de la Swisse Romande* publishes an interesting account of twins born at term, well

nourished and united by a fleshy mass, the upper part of which was formed by the xiphoid appendix, and the lower part enclosing the umbilical vessels. Three months after birth, one of them being in an apparently dying condition, it was determined to separate them. Six hours after the operation the weaker one died, the other lingered two days with symptoms of peritonitis. The autopsy showed the danger of the operation to have been in the presence in the pedicle of a band of hepatic tissue, uniting the two livers, and in the existence of one or two peritoneal culs-de-sac, enclosing the intestines, making a hernia through the pedicles of one into that of the other child. But two similar cases are recorded in medical literature. M. STANTON.

ACCIDENTS WITH AND AFTER TRACHEOTOMY.—By Dr. A. Steffer.

In the first case tracheotomy was performed on a boy two years old, who had just recovered from acute nephritis, for stenosis of the glottis. The breathing was, however, not relieved. and death followed.

On section, a croupous inflammation and exudation was found to extend from the epiglottis to the first tracheal ring. To the right and left of the trachea diffuse emphysema of the peritracheal and mediastinal connective tissue existed, extending from the lower angle of the incision, which extended through the upper tracheal rings to the bifurcation of the trachea and beginning of the bronchi.

As the cause of the pneumo-thorax, the author regards the extensive mediastinal emphysema, and perforation of the mediastinal pleura as the cause, there being no perforation of the lung.

A mediastinal emphysema may be produced by violent efforts at breathing, causing the alveoli to burst, the air thus gaining access to the interstitial and sub-plueral connective tissue and following the course of the branches into the mediastinum; or by the accidental wounding of the trachea.

As there was no emphysema in the lung, the mediastinal emphysema only extended to the bifurcation of the trachea, and beginning of the bronchi, the cause of the trouble must have been in the wounding of the trachea, the violent respiratory efforts causing the air that had passed into the peritracheal connective tissue to pass into the mediastinal tissue and to the pleura.

This must have occurred before the operation was completed, for the passing in of the tube afforded no relief to the respiration. Death took place from compression of the lung, caused by the accumulation of air in the pleural sack.

In the second case tracheotomy was performed on a child of the same age, suffering from croupous laryngitis, with double bronchitis.

On the fifth day after the operation, the edges of the incision and the surrounding tissue, down to the trachea, had become diphtheritic,

and so loose that parts could be easily lifted off by a pincette. After passing in the tube the respiration suddenly became very violent, so that it had to be removed. After introducing it the breathing became somewhat more slow and regular, but not as it had been. Fever and cough set in, and on the following day there was pneumonia of the entire left lower lobe.

The author thinks the pneumonia due to diphtheritic particles introduced with the tube.—*Deut. Med. Zeit.* H.W.A.

Effect of Narcosis on the Urine of New-born Children.—By Hoffmeier, Berlin.

In eight cases of labor, in which narcotics were used, the author found the urine of the new-born child more or less colored according to the amount used. In thirty-four cases in which none was passed, the urine in twenty-two was not the slightest colored, while in twelve it was slightly colored. The elimination of the urinary constituents in such children is greater immediately after birth than in those born without the use of chloroform. It also reaches its maximum twenty-four hours earlier and remains richer in the urinary salts and uric acid for the first week.

Narcosis also cause an increase of albumen in consequence of the hyperamia of the kidney, a result of the increased urine elimination.

He also found in the urine of children born while the mother was under the influence of chloroform, a peculiar pigment, in form of flakes and cylinders, dotted with black points; the author holds it to be changed blood extravasations. The loss of weight in such infants showed no difference in comparison with others.

His conclusions are, that narcosis in labor causes an increased elimination of urine and its constituents, in the first days of infantile life.—*Deut. Med. Zeit.* H.W.A.

Articular Rheumatism in Children.—By Dr. Carl Vohsen.

The acute articular rheumatism of children differ from that of the grown, in being of shorter duration, lasting mostly from ten to fourteen days, and in being more often complicated by chorea and heart disease.

Heart affection complicates nearly every fourth case, the severest cases of heart affection being generally associated with lightest forms of articular rheumatism.

From the report of the Strasburg Children's Clinic, nearly half the cases of articular rheumatism were complicated with endocarditis, developing usually from the first to the second week. The mitral valve and pericardium are the parts most affected.

The salicylate of soda, which has a beneficial effect upon the rheumatism, does not influence the heart affection. The author believes the frequent heart complications the result of the less resisting power of that

organ in children, and the anatomical relation existing between the serous membranes especially those of the joints and the endocardium.—*Deut. Med. Zeit.* H. W. A.

MENSTRUATION AND PREGNANCY.—Prof. Alessandro Cuzzi.—From numerous observations made by himself, the author advances the following points: First, that the weight and height of an infant, born at term, is in direct proportion to the number of days the menstrual period of the mother lasts; the greater the number of days that the menses last, the heavier and longer the child. Second, the same proportion exists between the number of pregnancies and the menstrual period; that is, the number of pregnancies is greater in those women whose menstrual period extends over greatest number of days.—*Deut. Med. Zeitung.* H. W. A.

THE TREATMENT OF VOMITING IN PREGNANCY.—By Dr. Mauney. At the meeting of the French Society for the Advancement of Science, Dr. Mauney recommended the cauterization of the neck of the uterus for cure of vomiting in pregnany. He had used the method eight times within the past fifteen years, without any unpleasant results occurring. Besides these eight, four other cases were reported by different doctors, in which like treatment had been used, the cure always being a prompt one. This method should, however, only be used when diet regulations meet with no success.—*Deuc. Med. Zeit.* H. W. A.

Editor's Table.

PROGRESS.—At this time of the year we are prone to make up and estimate the amount of work done, personal, professional, scientific. This would be the time for a summary of obstetric work done in the past year, still our readers bear us in mind that the important work has been recorded from month to month in our editorial and general abstract work. At the risk, however, of repetition, we make some brief epitome that will bear fresh attention.

Dr. Edward W. Jenks, of Chicago, made the annual address on gynecology to the Illinois State Medical Society, at the meeting in May, 1882. in which he brings up in a very interesting manner the recent contributions to this department of medicine.

The special treatment of fistules is alluded to, expressing our indebtedness to Bozeman and Sims; this, however, is scarcely to be considered

as any more amongst the special recent advances, because its merits have, some years since, been very completely established.

Uterine Massage is amongst the more recent methods of restoring a healthy condition to the uterine and neighboring structures. Dr. Reeves Jackson read a paper on this subject at the meeting of the American Gynecological Society for 1880; other distinguished gentlemen are pushing similar plans of treatment; the October number of this *Gazette* has a very suggestive abstract with cases illustrating this view of uterine therapeutics.

Emmet's Operation for restoring the cervical laceration has become an accepted operation with American Gynecologists, and at the meeting of the International Medical Congress in London, this operation was discussed with a degree of favor, and yet at that time a good many absurd statements were made in regard to the operation—both its character and effects and importance. But yet, immediately thereafter Dr. Playfair read a paper before the London Obstetrical Society, in which he spoke highly of the operation and paid a high tribute to the labors of Dr. Emmet. So far, then, as Dr. Emmet's operation for lacerated cervix is concerned, the leading gynecologists of Europe and America accept it as a very important method, and yet it is evident that a degree of reaction is coming up, and that the claims of Emmet's operation for lacerated cervix, as a valuable restorative operation, is to be contended. Very probably we have claimed more for the operation than experience will support. A few more years of clinical reports and we shall pendulum back to the proper estimate.

Under the head of *Ovariotomy* Dr Jenks discusses the question of Listerism. There has been a wonderful change in this matter within a year or two; just now, according to Jenks, we have simply a "modified" Listerism; by and by we shall probably have only measures for complete or absolute cleanliness. It it very certain that with Listerism to some extent, or some of its general principles, we have had a greatly improved percentage of recoveries in the ovariotomies, and yet some of the most positive fatal results have followed what has been regarded as strictly Listeric antiseptic measures.

Hysterotomy. The next topic discussed by Dr. Jenks is the question of removal of the uterus, especially for malignant disease. If cancer has invaded the body of the uterus and has not yet traveled to the adjacent structures or tissues, it would now seem very clear that a removal of the whole mass will afford a promise of life to the patient. Just now the operation of Freund and removal by the vagina is the best method. Other tumors than malignant may very properly be removed by the vaginal operation.

Porro's Operation.—In this connection the operation of Porro is naturally suggested. The removal of the entire uterus and ovaries is proposed,

not exactly for malignant or fibrous disease, but for pregnancy where the pelvic deformity is such as to interfere with delivery. The operation of Porro is, after all, really a substitute for the Cesarean section. How far the operation of Porro will prove to be a valuable measure for prolonging life is, perhaps, yet to be further discussed and examined. It is a bold operation and in certain cases affords a great deal of hope.

Battey's Operation. In conclusion the paper of Dr. Jenks considers the importance and special indications for the removal of the ovaries by what is known as oöphorectomy. Painful and persistent dysmenorrhea—chronic diseased conditions of the ovarian bodies—are suggested as proper conditions for the Battey operation. The gentleman so distinguished as the author of this operation has become almost world wide in reputation, and yet is most extreme in his modest claims. How far this operation will prove of permanent value remains as yet to a degree *sub judice*, but is evidently one of the gynecological methods destined to a permanent place in the resources of our art. The indications for the operation and the guides for its performance will become more and more exact as we progress in our experience.

Cincinnati Obstetrical Society.—The annual meeting of this Society was held on the evening of the 11th of January, at the office of Dr. Hyndman. The following officers were elected for the current year.

President, Dr. J. Trush.
Vice President, C. O. Wright.
Recording Secretary, Clara Ellsbury.
Corresponding Secretary, J. G. Hyndman.
Treasurer, Geo. E. Jones.

At this same meeting a project for a library and repository, as reported by special committee, Dr. Trush, and printed in the December number of the *Obstetric Gazette*, was fully considered, and the plan adopted. In due time this project will be entered upon, as we believe, with a good deal of enthusiasm; and as it matures, will make another, and peculiarly attractive professional object, of value to the local members and of interest to visitors to the city.

Editorial Change.—In resigning the editorial management of the Obstetric Gazette I wish to thank the contributors and readers for the hearty and continued support they have given the journal. Without their literary aid my efforts towards producing a readable periodical would have been fruitless, and without their appreciation and patronage the financial support would have been lacking; so that after all the editor is a most dependent creature. My connection with the journal has been of an unusually pleasant character, and it is not without regrets that I sever

it; but lack of time with me is becoming more and more manifest; and what is now expedience would ere long be necessity.

R. B. Davy.

[With sincere regret we part with the services of Dr. Davy, and even more than the readers of The Gazette will miss his ever ready and willing support in editorial work.—Publisher.]

Ovariotomy—Essentials for Success.—The whole subject of ovariotomy is so fully discussed in all its aspects that we hesitate to make any fresh editorial remarks. Some time since, however, Dr. Skene, of Brooklyn, contributes such an excellent paper that we feel that our readers deserve its cream.

Dr. Skene starts off with the proposition that ovariotomy is the most difficult operation in the whole field of surgery. He enforces this with this remark, that "the operation differs from all others, in the number and variety of complications it affords."

Most other operations are to a great extent definite; the anatomy being the same, and the *modus operandi* fixed according to well defined rules.

The first essential is to know how to operate. A knowledge of the books is important—the theory of the operation is absolutely needful—but after all an operator must be a good surgeon in general, and ought to have had abundant opportunities for personal observation of the operation itself. There are so many details—so many accidents liable to occur that only personal experience can be expected to meet.

Dr. Skene makes, in passing, some very good suggestions in regard to the use of anesthetics. He strongly favors ether as the safest agent, and enforces with emphasis the value of time. The administration should be prompt and carefully kept up. Fifteen or twenty minutes wasted in anesthetizing gives so much unnecessary blood poisoning "giving nitrous oxide gas first, and following it up with ether, is the most rapid way of anesthetizing."

In regard to complications. "First as to firm adhesions. The forcible and reckless breaking down of these has given way to the practice of seizing them with compression forceps, carefully dividing, or breaking them and arresting all hemorrhage before losing sight of them." In the management of the pedicle, Dr. Skene very decidedly gives preference to the management by the cautery. He thinks this gives the best results, and that it would be more generally employed if more fully understood. "The object is to desiccate at least half an inch of the end of the stump and avoid charring it. The stump thus treated looks like a piece of translucent horn. The divided edges of the vessel are completely closed, which guards against hemorrhage. I presume that the end of the stump does not slough, but becomes hydrated and finally organized."

So far as antiseptic methods are concerned, Dr. Skene is very satisfactory, and we quote him in full.

The next, and perhaps the most important essential of success, is cleanliness, or, to put it technically, antiseptic methods of operating. Surgeons were beginning to feel a certain sense of security in performing ovariotomy when they carried out all the details of the Listerism method; but more recently they have found that carbolic acid in place of saving patients, sometimes sacrificed. When the dangers of carbolic acid spray in ovariotomy were first announced, many surgeons thought that Thomas Keith had given up antisepic surgery; but that great surgeon is still as earnest and enthusiastic in his war against dirt as he ever was. Although he has given up the use of the spray, because he found the good that it did was counterbalanced by its injurious effects, he still retains all the other known elements of antiseptic surgery. These elements I understand to be, first, to keep wounds free from extrinsic germs, which are in themselves injurious to living tissues, or which favor morbid action in the tissues; and on the other hand to provide for the escape of morbid material which may be developed in wounds. To prevent the entrance of septic germs, perfect cleanliness of everything which pertains to the operation is necessary. The carbolic acid spray can at most only disinfect the air in the operating room, and consequently it is only one fraction of the antiseptic method of operating. Clean operators and assistants, clean instruments, sponges and everything which may directly or indirectly come in contact with the patient before, during, and after the operation, are all of the highest importance. Still more, it is absolutely necessary to keep all things clean during the operation. A clean, fair start may be made; but during the operation, the operator's hands and the instruments may become contaminated by contact with the contents of the cyst and the patient be exposed to septicemia. This has often occurred when the spray has been fully and faithfully used. Indeed, if too much dependence is placed upon the spray, there is great danger of contamination from want of care in other respects. Some of the fluid contents of the cyst may enter the abdominal cavity, or the hands of the operator or his assistants may become soiled from the same source, and mischief may be wrought in that way. In short, it is exceedingly difficult to guard against all sources of uncleanliness in this complicated operation. I think, then, that, if all the other essential elements of antiseptic surgery are carefully observed, the spray may be left out and still a high and perhaps the highest success can be attained. But spray or no spray, too much cannot be said in favor of antisepsis in relation to ovariotomy.

There is still another fact which stands out prominently, and upon which success depends, and that is the management of the dead material which may be unavoidably left in the abdominal cavity, or that may

accumulate there after the operation. All the members of this Society whose fellowship dates back ten years, must remember the paper read by Dr. J. Marion Sims, in which he pointed out the dangers of the bloody serum which so often accumulates in the abdominal cavity. They will also remember how he urged, with all the force of his genius and enthusiasm, the necessity of removing that often fatal material, by drainage. He at that time advocated drainage from the sac of Douglass through the vagina. That way has been supplanted by other and better methods, but what of that? his views were based upon the principles of the highest order of modern surgery, and to-day are held in higher estimation than they were then. It is true that within the last year or two there has been some difference of opinion regarding the value of drainage. The great men in London have laid it aside as a rule, while the lion of the North still employs it and insists that he saves many of his patients by it. When such great authorities are at war, the junior ovariotomists of Brooklyn may well pause to inquire what the results of this conflict will be.

By the dim light of a not very mature judgment and a very limited experience, I can see that those who employ drainage have the best of it. I incline to this view because Keith, who practices drainage when necessary, still scores the highest number of successes; and because the reasoning against drainage by those who have given it up does not appear to fully harmonize with the facts in the case. It is claimed that if ovariotomy is performed with all the attendant means of antisptic surgery, including the spray, any fluid which may be left or that may accumulate in the peritoneal cavity, is harmless. Spencer Wells states that either fluids do not accumulate after the use of antiseptics, or if they do collect they do not putrefy, but are absorbed without injury.

Now it is difficult to understand how antiseptics used in the operation could prevent the accumulations of serum in cases where there were many and extensive adhesions; and on the other hand, it is equally incomprehensible that carbolic acid in sufficient quantity should remain in the abdominal cavity and disinfect the fluids which transude from broken surfaces. Without daring to decide the matter, or express any positive opinions, I may state that the truth appears to me to be this: Antiseptic operating will lessen the danger to a very great degree, but there ever will be cases which call for drainage.

The value of drainage depends largely upon the mode of using it. The method which I have usually seen practiced in this country is to pass a tube through the lower angle of the wound down into the sac of Douglass and closing the outer end of it. The cork is removed several times a day and the fluid pumped out. This gives a kind of intermittent drainage which is imperfect. The method which I obtained from Dr. Keith is much better. In place of closing the end of the tube he passes it through the

centre of a piece of rubber cloth, and then places a carbolized sponge upon the end of the tube. The rubber cloth is folded over the sponge and tied securely with a string. The tube and the sponge are thus excluded from the air, and any fluid which accumulates wells up through the tube, and is taken up by the sponge. The sponge is changed several times a day, and any residual fluid which may remain is pumped out at each dressing. In this way continuous drainage is kept up, and still a perfect antiseptic dressing is maintained. This may appear to be a simple matter, but it constitutes the differenee between perfect and imperfect drainage. In a case operated upon last summer I obtained twelve ounces of fluid in thirty-six hours by this method of drainage, and the temperature of the patient never rose above normal, excepting one day when it reached one hundred, and remained there for a few hours. This case alone would be sufficient to demonstrate both the safety and value of drainage.

Removal of a Remarkable Fibro-Cyst of the Uterus. — Dr. Walter Coles, of St. Louis, reports this case to the St. Louis Obstetrical Society. The patient was confined October, 1881, when a second tumor presented of such striking dimensions as to suggest extra-uterine pregnancy. Dr. Coles was called in consultation and made a qualified diagnosis of fibro-cyst. In May, 1882, the case was operated upon by Dr. Coles.

The abdominal incision was commenced high up near the umbilicus, and extended downward two-thirds of the way to the pubes. I then introduced my hand and ascertained that the tumor was firmly adherent to both sides of the pelvis; and by aid of the sound it was evident that the empty bladder was spread out high up on its anterior face. There were no other adhesions, as far as could be made out. The walls of the tumor were of a pinkish hue and full of interlacing blood-vessels; such was its elasticity that it seemed certainly to contain considerable fluid. On attempting to thrust a trocar into it, however, it was found impossible to do so without using undue violence. The wound made by the trocar bled freely. An exploring trocar was then passed in, and by moving the instrument the cystic character of the tumor was demonstrated; a few drops of serous fluid escaped through the canula. A crucial incision was now made with a knife through the thick walls, and several fingers introduced into the interior of the growth, the cavity of which was ascertained to be filled with light gray flocculi and serum, resembling curds and whey. The walls were two inches thick; the inner lining being ragged and soft; each successive layer from thence to the surface being more and more dense and highly organized. Finding that the tumor could not be materially diminished by emptying its semi-fluid contents, the abdominal incision was enlarged upwards above the umbilicus, toward the pubes, to the dimensions of about ten inches. I then passed one hand

behind it, and after satisfying myself that there were no adhesions to prevent, I lifted it up towards the abdominal opening, being aided in so doing by a finger of the other hand hooked into the front opening, also by a strong volsellum in the hands of an assistant; by means of some little force the tumor was thus delivered.

The left ovary was found enlarged and to have undergone cystic degeneration; it was therefore deemed advisable to remove it. The case progressed over a tedious detail of pyemic conditions with pelvic abscesses, but ultimately with recovery. Dr. Coles certainly deserves credit for his successful result in one of the most difficult cases of abdominal surgery.

Abstracts and Selections.

I.—OBSTETRIC.

Puerperal Diabetes.—A paper on this subject was read by Dr. Matthews Duncan, at a late meeting of the London Obstetric Society. The author pointed out the distinction between the slight glycosuria of pregnant and suckling women and real diabetes, with its polyuria and large amount of sugar. Physicians and surgeons were well aware of the dangers introduced into their cases by complication with diabetes. But the subject of diabetes complicating pregnancy and parturition had attracted almost no attention; and this probably arose from its rarity, which might be accounted for by the disease frequently destroying in women the sexual energies, as it is said to do in man. The author had collected twenty-two cases in fifteen women, and they demonstrated the great gravity of the complication as respects both mother and child. Of the twenty-two pregnancies (including those ending prematurely), four had a fatal result soon after delivery. In seven of nineteen pregnancies in fourteen women, the child, after reaching a viable age, died during pregnancy; in two the child was born feeble and died in a few hours—making an unsuccessful issue in nine of nineteen pregnancies. The histories showed that diabetes may supervene on pregnancy; that it may occur only during pregnancy, being absent at other times; that it may cease with the cessation of pregnancy; that it may come on after its cure. They showed that pregnancy may occur in a diabetic woman; that it may be not appreciably affected in its natural progress and termination by the disease, and that it is very liable to be interrupted by the death of the fetus.

Dr. Robert Barnes had investigated the condition of the urine in pregnancy, as to albumen, urea, and sugar. The occurrence of sugar was physiological, though not constant. Sinéty had shown that sugar appeared in the urine when lactation was suppressed; this was of interest in connection with the normal fatty change in the liver shown by Tarnier to occur in pregnancy. He (Dr. Barnes) drew a parallel between albuminuria and glycosuria during pregnancy. Both were physiological, but might pass the physiological boundary, and then grave accidents ensued. *Louisville Medical News.*

II.—GYNECIC

Diagnosis and Treatment of Chronic Inflammation of the Ovary, by Lawson Tait, F.R.C.S. —The diagnosis of uterine diseases may be said to have received its first real life from Simpson; for, before his day, no such attention was given to these affections as deserved the name of systematic study. He it was who instituted precise means of physical diagnosis, and upon that he reared methods of treatment which have made a lasting impression on our practice. Like all innovations, Simpson's methods led, even in his own hands, but mostly in those of his friends and old lovers, to an excess of zeal; and the mechanical school of gynecology, of which he was unquestionably the founder, led many to the belief that armed with a sound, a speculum, a caustic stick, and some new-fangled pessary the practitioner could subdue all the pelvic ailments of women. All these aids, valuable in their way, had their enthusiastic supporters, were declaimed against by others, did an infinite amount of mischief in their turn, and have, finally, been referred to more limited and less hurtful fields of practice.

From the same phase of surgical development arose a number of operative proceedings, each of which has extended our means of relieving human suffering, but each of which went through a course of rough experimentalization which is now terrible to look back upon. Simpson found that division of the cervix relieved the sufferings in certain cases of dysmenorrhea, and enabled a few sterile women to become pregnant. Immediately we had a flood of hysterotomies all over the world, and every sufferer had her cervix divided. Thousands of unnecessary operations of this kind were, and many still are performed, and not a few deaths occurred from the practice.

Coincident with this innovation, we had the employment of pessaries, fortunately a less hurtful practice, but carried to an extent of usefulness which is positively amusing, and other illustrations of similar strivings in the dark might be given.

From the writings of Dr. Henry Bennet and Dr. Tilt, especially the

latter, another new departure was derived; for attention was directed by these authors to the possibility of the ovaries being the seat of the troubles, relief from which was sought in the treatment of the uterus.

Still another impetus, and the greatest of all in my opinion, was given to gynecology by Dr. Thomas Keith, who taught us that our traditional fear of the peritoneum was only a bugbear, and that it would serve us as well as any other part of the body if dealt with fairly. After Mr. Spencer Wells had gone on for twenty years operating on hundreds of cases of ovarian tumor, with a mortality of about twenty-five per cent., Dr. Keith persuaded us that ovariotomy could be done with less than six per cent. of deaths. The mortality of Dr. Keith's and my own is now as low as three per cent., and this after we have both tried the so-called antiseptic system of Lister, and have given it up as more dangerous than useful.

The outcome of such splendid work in the removal of ovarian tumors will soon be felt in very many ways, but in one it has already given evidence of another and altogether new direction for abdominal surgery. As long as Mr. Spencer Wells' example ruled our practice, and as long as his high death-rate was the best we could get, we operated on ovarian tumors only when they did not threaten life. Now, when the removal of an ovarian tumor is fatal only when the patient has been tapped, or the operation injudiciously delayed, we are justified in performing abdominal section, not merely for the saving of life, but for the relief of suffering.

This new practice has had many good results, not the least of which is that it is shedding a whole flood of light on the pathology of pelvic disease, and is even helping us to understand the physiology of the female sexual organs. Thus my own practice, the details of which will shortly appear in a special work, has convinced me that the usually accepted doctrine of the coincidence of ovulation and menstruation is wholly erroneous. The ovaries have nothing to do with menstruation; and though I give the opinion with a qualification which may be made necessary by further experience, so far the evidence before me is convincing that the phenomena of menstruation depend upon the Fallopian tubes and not upon the ovaries. Finally, and of most importance for my present purpose, we are for the first time becoming cognizant of the real conditions involved in the disease recognized as chronic inflammation of the ovaries. For such a purpose as this an abdominal section has been well said to be of as much value as a post-mortem examination; I would say it is more valuable, for we have the exact clinical record side by side with the morbid appearances.

We all know that, in its healthy states the ovary is just like the kidney —it is an organ of the existence of which the owner is profoundly ignorant. Unless it become diseased, it gives no sensations which indicate its existence. But, when diseased, no organ of the body gives such dis-

comfort; and its diseases are often fatal, this result being by no means confined to cystoma.

Acute inflammation of the ovaries is often fatal; and, when not fatal, it generally leads to a state which makes lifelong misery, though I have seen cases in which there was no history of the acute form.

The origin of the acute disease is various. It may be in a simple chill, in a hematocele, in an attack of gonorrhea, in some exanthematic fever, or in miscarriage or childbed. The last two sources are by far the most common, and they present two specific varieties of the disease—interstitial oöphoritis and peri-oöphoritis.

Many of the cases of acute oöphoritis undoubtedly recover and leave no mischief behind; but in others, the permanent mischief gives rise to suffering which to men is fortunately inappreciable. Most patients will fix a date from which they will say they have never known what it is to be well A woman who has had acute exanthematic oöphoritis, with permanent mischief, will say that since she had the small-pox, scarlet fever, or acute rheumatism, she has never had her periods as she used to have them. For a time they were more profuse than before; then they became scanty and painful, the pain increasing as time went on, lasting a week or even two or three weeks in every month, rendering her utterly miserable, and being relieved by nothing but narcotics. We examine the pelvis, and find, perhaps, nothing at all. We give her iron and tonics, and all sorts of drugs, and she is no better. She goes to one specialist, and he divides her cervix or amputates it, without relief; to another, who applies some useless pessary; and so on, all in vain. If she marry, she does not become pregnant. If she be in the better ranks of life, rest and luxury, with constant change of scene, make her life endurable; but if she be the wife of an artisan, her life is one long unhappiness till the climatic period is passed; and during that period of trial, many of these women become drunkards.

Cases of chronic disease arising from acute peri-oöphoritis give usually more specific indications, at least to one accustomed to pelvic examinations. Suppose that it has arisen in some attack during the puerperal month, the patient will say that she was ill with "inflammation of the bowels," and was a long time in getting about; that she has never been pregnant since, and is hardly ever free from pain. The majority of these cases occur in primiparous women, and therefore the first feature in the case to be noticed is often that the patient has had one child soon after marriage, and has never again become pregnant. If the patient be living a married life and bearing children, that alone is proof that she is not the victim of this disease, for it uniformly unsexes the sufferer so far as maternity is concerned. It also unsexes its victims for marital life in all severe cases, for they can not endure it; and in the milder cases they can not get well, as long as they have to submit to it.

As far as general symptoms are concerned, they are rarely free from

pain: and this is generally intensified during the menstrual week, for the reason that the tubes are always involved. In most of the cases, the tubes are chiefly at fault; for I often find the ovaries cystic or shrivelled, so as to be of little account in explaining the symptoms. There is always pain in the left side in the groin; for, if one ovary be affected, it is sure to be the left. In the exanthematic cases, we have to trust almost entirely to the story of the patient as to subjective symptoms; and therefore, in this class of cases, mistakes will be made until we arrive at a more perfect method of diagnosis. In the second class of cases, however, the objective conditions are easily recognized by the practised finger. A fixed and tender mass, composed of the large and probably adherent ovary, or of the occluded and distended tube, will be felt on one or both sides of the uterus through the vaginal *cul-de-sac*, and the peculiar sickening pain felt by the patient when the mass is touched will afford conclusive proof as to its nature.

What is to be done to relieve such cases? The general principles of treatment are those applicable to all such conditions, in whatever part of the body they are met with. The first of all is rest; but unfortunately, we cannot rest the ovaries or the Fallopian tubes. The former will go on trying to fulfill their function of ovulation: and every month or oftener, the inflamed organs are temporarily congested by the occurrence of menstruation. Much may be done, however, by absolute rest in bed for the whole menstrual week, and absolute abstinence from intercourse. It is very rare, however, that we can persuade patients to carry out this regimen long enough; and hospital patients will not attend to it all—indeed, they cannot. Counterirritation by blisters or setons is also to be tried. The only drugs of the slightest use are bromide of potassium and ergot.

After a persistent trial of these without benefit, there remains for consideration the question of removal of the diseased organs—a proceeding which is based on the soundest and most completely accepted rules of surgery. Let us take a perfectly parallel case. From some injury or gonorrheal affection, an eye becomes acutely inflamed, and the acute process is followed by intractible chronic inflammation of the structures of the globe—a matter of every day occurrence. The ophthalmic surgeon removes the diseased organ, to save the patient's comfort, perhaps the sight of the other eye, perhaps his life. He mutilates the patient most seriously in that part of the body where mutilation is most dreaded. He removes a diseased and useless structure. We remove inflamed and useless ovaries and tubes to relieve suffering, in some cases to save life; and we do not mutilate our patients half so seriously as is done in the removal of a diseased eye which often fails to save the other, and is then a useless operation. Removal of a cancerous eyeball is always a useless operation, for the disease always returns.

Removal of the inflamed uterine appendages may yet turn out to be a failure for some cases; but it can never be so bad as the removal of an eyeball for cancer; and, in the hands of experienced operators, the operations have quite an equal risk. Besides this, the operation for the removal of the uterine appendages is as yet in its infancy; we have very much to learn about it; yet, in spite of this, in my hands, of thirty-five cases performed for chronic inflammation, there has been only one death, or a mortality of 2.85 per cent.—mortality which, I have some reason to believe, is less than that of excision of the eyeball. This one death was due to causes entirely preventable, and ought not to have occurred. The operation is justified by its primary success; and my belief is that my mortality, as my experience goes, will not be more than 1 or 2 per cent.

Against the operation, *a priori*, arguments have been brought. The first of these is, that it unsexes the patient. This is a perfectly needless argument, because the disease for which the operation is done, has already accomplished this, as it has rendered her barren, and has made sexual intercourse a burden which she ought not to be called upon to bear. It has been said that removal of the uterine appendages destroys sexual desire; but the uniform testimony of such patients as have given evidence is that it has no such effect. But, suppose it did, what nature can any man have who would refuse to his wife relief from suffering, because it interferes with the gratification of his lust? I am surprised that such an argument has been seriously advanced.

It has further been alleged that useless operations will be performed. Until our powers are perfect, this is very likely. But of what operation in surgery can this be denied? Have we not heard of lithotomies being performed where there was no stone—of amputations carried out where there was no disease in the joint? How many thousands of people have been cut for squint, when what they wanted was a pair of proper lenses.

As a matter of fact, I have found that the mere serious discussion of the operation with a humbugging patient will lead to a diagnosis. If her sufferings be real, she will jump at the chance of relief; if they be not, she declines to take the risk of the operation.

But such an operation as this demands the justification of ultimate success; and here we are on the most difficult ground. The most recent summary of cases is to be found in the second volume of "Agnew's Surgery," just published, in which 171 cases are tabulated, the work of forty operators, with a mortality of nineteen cases. This is quite a satisfactory explanation of the opposition with which the operation has been met. I should long since have condemned the proceeding, and discontinued my practice, if my mortality had been 10 per cent. In fact, I did cease to operate for five years, because my mortality was 20 per cent. Of the forty operators in this table, there are only three who have ope-

rated on fifteen or more cases for all causes, not only chronic oöphoritis. These are:

Hegar	42	7 deaths.
Battey	15	3 "
Lawson Tait	30	4 "
Total	87	14, or 16.6 per cent.

Increased experience, therefore, brings better primary results; and this is more than ever visible, if my whole experience is taken of 75 cases. with only 6 deaths, or 8 per cent. In my recent experience of 61 cases there have been only 3 deaths, or 5 per cent.; and, confining it to the cases of oöphoritis of 35 cases, there is only 1 death, or 2.85 per cent. It is clearly, therefore, an operation which can be justified by its primary success only in the hands of a surgeon who has large and constant practice in abdominal surgery; and when it is done by a large number of operators, in twos and threes it can only meet with speedy and well-merited condemnation.

Precisely the same kind of treatment applies to its secondary results, which, in the hands of inexperienced operators, are admittedly bad. For my own results so far I have abundant cause for satisfaction; some of my cases are yet incompletely relieved, but by far the majority of them are absolutely cured. The first patient from whom I removed an ovary for pain, nine years and a half ago, was completely relieved of her symptoms, and she remains so to this day.

I cannot burden this paper, already too long, with the recital of cases, but two I shall give as samples of what may be done by this operation and I select them only because, having been promptly cured themselves, they have ever since been actively engaged in helping to cure others as surgical nurses. One of them is now attached to my own private staff, and has materially assisted in the recovery and cure of many of her suffering sisters.

G. B., aged twenty-four, when placed under my care by Dr. Hammond, of Nuneaton, had enjoyed perfectly good health until she was seventeen years old. At that time she had some kind of low fever, the nature of which she did not know, and no history of it could be obtained. During its progress she suffered greatly from pelvic pain, and was nine months in getting better, but practically she had never been well since. She had never been free from pain in the back and in both groins, the pain running down both thighs and being greatly intensified just before and during each menstrual period. She had had a great variety of treatments, the general view being that there was some displacement of the womb. Several operations had been performed, and she wore pessaries for some months. The result of all this was that she steadily grew worse, and for three years before being placed under my care she had been a helpless cripple.

Her general appearance was that of good health; in fact, she was distinctly robust in appearance. Her menstruation was regular, but scanty, seldom lasting more than two or three days; and during that time she described the pain as being agonizing, and those who had watched her saw no reason to doubt her words. My diagnosis in this case was that of cirrhotic oophoritis, the result of acute inflammation of the exanthematic variety. I proposed to remove the glands; but, when the whole features of the proposal were explained to her, she promptly declined to submit to it, and left the hospital. On October, however, she voluntarily returned, and begged me to operate. I complied with her request upon October 15th, and found the ovaries small, atrophied, and adherent. They afforded, in fact, typical examples of the changes effected in the glands of this disease. The tubes were also adherent, small and atrophied. The removal of the appendages was difficult, as it nearly always is in such cases. She made a rapid recovery, and left the hospital early in November. She did not menstruate till the end of April, 1880, and at that time declared herself greatly improved. I lost sight of her till the 8th of September, 1881, when she came to show herself as a perfect cure. She had been for nine months, and is now, engaged as a surgical nurse in a large general hospital, is peculiarly fit for her arduous duties, and says she is in perfect health. She menstruates occasionally, but entirely without pain.

J. W., aged twenty-four, began to menstruate at thirteen, and was regular and free from pain till she was nineteen. Then she had an acute illness, and ever afterwards suffered intense pain for two days before and during the whole of her periods. The amount of loss became very profuse. She was admitted to Leicester Infirmary, and was there for many months, and obtained considerable relief, the treatment being to a large extent local, by pessaries, etc. After this she went out to service, but had to leave every situation on account of being wholly unfit for work for the greater part of the mouth. She was treated in several medical institutions, but obtained no permanent relief, and ended by becoming an outdoor pauper. She was sent to me in July, 1880, when I found the ovaries large and tender, and fixed down behind the uterus. I removed them and the tubes on July 18th, the operation being a very difficult one. The glands were both cystic, and the tubes occluded and distended. She recovered speedily, and in a few weeks entered upon her duties as a nurse. —*British Medical Journal.*

Improved Method of Treating Uterine Displacements.— Robert Bell, M.D., contributes the following to the *Edinburgh Medical Journal*:

The peculiar posing of the uterus in the body, the elasticity, or rather yielding nature of its supports, and its dependence upon the health of the neighboring viscera for this support being uniformly maintained, renders it

peculiarly liable to displacement. Anything which interferes with the circulation in the pelvis will naturally interfere with the health of the womb, and will thus render it more susceptible of disease, and will predispose to malposition. If constipation exists, then the weight of the feces in the sigmoid flexure and the higher reaches of the colon will not only interfere with the free circulation in the pelvis, but will also, by mechanical pressure on the organ, crowd it out of position. If we have an irritable bladder, and in consequence of this the viscus being unable to retain more than a few drams of urine, the straining which accompanies micturition will force the uterus forwards. Another pregnant cause of displacement is dyspepsia, which, causing distention of the intestinal canal, brings undue pressure to bear from above upon the fundus. One more powerful factor has recently been pointed out, viz., the endeavor to obtain greater compass and volume in singing by powerful action of the abdominal muscles, and so forcing downwards all the viscera. It is obvious that any causes such as those enumerated must be removed before local remedies can have the desired effect. It will also be necessary to attend to the health of the canal of the neck and body of the organ at the time the displacement is being tackled, or we will be most certainly disappointed.

I have had this remedy as it now stands in use about two years, and have treated over 200 cases by means of it alone. I have not used a pessary during the past eighteen months. Every form and gradation of displacement has come under observation, and in every case great relief was obtained, and in the majority of cases a complete cure was the result. The patient requires to be under careful and patient observation for weeks in every case, and in many instances for months at a time; but surely these are trifling objections. I had used, for years previously, the ordinary glycerine of tannin of the pharmacopœia; but, though I found it a most efficacious astringent, yet its expense and the disadvantage of staining the underclothing told very much against it. Had recourse to the following: Glycerine, 80 oz.; alum, 10 oz.; carbolic acid, 1¼ oz. If a displacement continues for any length of time, hypertrophy of some portion or of the whole organ is the result. We have thus a greater strain thrown upon the uterine supports, so that what at one time was a result becomes a factor in aggravating the disease. Our first duty, then, is to endeavor to reduce the overgrowth, and at the same time prevent its recurrence by rectifying the position of the organ and retaining it *in situ*. When we have a hypertrophied condition of the walls of the uterus, in the majority of instances there is softening of the texture, so that a flabby condition results. In these cases it is a matter of little difficulty to restore the position of the organ, but as soon as the support is removed it falls back into its abnormal position. Moreover, if there exists (which frequently does) any amount of inflammatory action, the presence of a

pessary is a most serious source of danger; and besides, supposing there is no danger of an attack of acute metritis, there yet remains the disadvantage that the relief is entirely due to the fact of a mechanical support being retained in the vagina, and which every little while requires to be removed to make way for one of larger size, till in the course of a short time the walls of the vagina become as capacious as the pelvis will admit of; moreover, the woman always retains the disagreeable consciousness that she is wearing an instrument, and there is ever present the danger of the hard pessary injuring the soft parts upon which it is constantly resting. A pessary to be of service must fit accurately, and only long experience and patient care will ensure this result. If it does not apply itself with precision to the parts, it certainly will result in serious mischief. One advantage of my treatment is, that it is rarely necessary to employ either probe or elevator when there is a flexion. This is another prolific source of danger removed.

Prolapse of the uterus: This may vary from a slight lowering of the position of the womb to complete procidentia. It is due either to (1) an increase in weight of the organ; (2) to faulty action of the supports; (3) it may arise from pressure from above, or from all these factors combined.

A lacerated perineum must of course be rectified before treatment. From whatever cause prolapse occurs, there is always, as a result, hypertrophy of the organ and relaxation of the vaginal walls and uterine ligaments. If the uterus, then, is elevated to its normal position, and retained there by a suitable appliance, the hypertrophy will disappear, and if at the same time we can stimulate the cappillary circulation of the parts, and also cause a steady drain to take place of the watery constituents of the blood in the uterus and its neighborhood, we will do much to remove the tendency to the displacement by reducing the size of the organ and simultaneously strengthening its supports. This end is attained most satisfactorily by replacing the prolapsed uterus in its normal position, and retaining it there by a tampon of cotton saturated with the glycerine of alum and carbolic acid, and allowing this to remain in the vagina from three to four days. The tampon excites an abundant water discharge from the vagina, necessitating the patient constantly to wear a napkin. Glycerine excites this discharge, but when combined with an astringent, the effect is an even more profuse drainage of the watery components of the blood; the effect on the capillary circulation is also intensified, and the astringent effect on the vaginal wall is most beneficial. By this means alone I have completely cured procidentia which existed three to eight years, after above treatment had been persevered in for from two to seven months, and in a few cases where the disease existed for a much greater time very great relief has been experienced after more protracted treatment. If the tampon is merely saturated with glycerine, it becomes very offensive after a few hours; when, however, the carbolic

acid is added, there is no fetor at the end of four days, when the tampon may be replaced. We can keep the organ *in situ* for months, and likewise act on it and the neighboring tissues to restore them to a healthy condition, the woman's general condition indicating a marked improvement. I claim for this method of treatment equal advantages with any plastic operation that may be performed upon the vaginal walls; and there is this, that the uterus itself also probably partakes of benefits which an operation on the vaginal walls cannot confer.

Versions and flexions of the uterus: I have treated quite a number of cases which had been subjected to the general routine of pessaries and stems without deriving any benefit whatever, and which have, after a few applications of the tampon, expressed themselves as feeling great relief. It may perhaps be interesting to give one case. This lady had been suffering from retroflexion of the uterus for six years, which was aggravated very much by obstinate constipation, but this symptom had been quite overlooked. She was a most miserable-looking object, with an ashy complexion, which, however, was partly attributable to the absorption of fetid matter from fecal accumulations in the rectum and colon, as when these masses were removed and kept from accumulating, her complexion improved, and she felt somewhat relieved in every way. Yet the least exertion completely prostrated her, and the dysmenorrhœa was most intense. For six years she had been under treatment by means of pessaries and stems of all descriptions, from solid silver stems down to pessaries made of gutta-percha covering copper wire, and with no benefit; in fact, she was daily getting worse. In this case I used *two* tampons saturated with the solution, one much smaller than the other, so that it would occupy a position supporting the fundus, well up in Douglas' pouch, while the other and larger tampon was placed behind the cervix, and acted as a support to the smaller. After three months she was able to endure considerable fatigue, and eat and digest satisfactorily, and sleep well, feats she could not perform before; and at this moment I know she enjoys life thoroughly.

I think it often a good plan to employ two tampons in retroflexion and also in anteflexion, but, as a rule, one answers all the purposes. It is gratifying to observe the speedy effect of this treatment on the bladder symptoms in anteversion and anteflexion. I think I need hardly enter into further details as to the method of treating other varieties of displacements.

Notes of Case Eleventh of Ovariotomy.—By H. P. C. Wilson, Jr., M. D., Gynecologist to St. Vincent's Hospital, etc., in the *Maryland Medical Journal.*

November 26th, 1882, I went to Hartford County, Md., to meet Dr. Cochran, of Havre-de-Grace, in consultation regarding the case of Mrs.

——, from whom I had successfully removed an ovarian tumor January 5th, 1881. This lady had been brought to me about October 1st, 1882, on account of a small tumor situated in the right groin. On examination then I was satisfied that this was ovarian, but she was so feeble, and her glandular system so involved that I refused to operate, because, first, I was sure she would sink under the operation; second, I feared malignancy of the tumor; third, I did not think that so small a tumor could alone be the cause of her great debility, and the enlarged and indurated lymphatic glands unless malignant. I therefore sent her home to await developments, but directing for her tonics, alteratives and free nourishment.

For a time she seemed to improve; then ascites appeared accompanied by nausea, and she rejected all the food taken into the stomach, until from her great distress Dr. C. was obliged to tap her about three weeks prior to my visit, drawing off about four gallons of fluid. After this she retained food and recuited for awhile; but the abdominal cavity refilled, producing a return of the nausea and vomiting and greatly oppressing her. It was at this juncture I was called to see her, as it was feared she was too weak to be brought to me.

I found her, as described above, with the lymphatic glands of the neck, axilla and groins, twice to four times their natural size and as hard as stones. The mamme were much enlarged—the right twice as large as the left, and almost as hard as carcinoma. The labia majora and minora were very much enlarged and as hard as cancer, and were so closely united and so unyielding that it was impossible to separate them so as to see the meatus urinarius. The tumor had grown in less than two months from the size of a small orange to four times that size.

She was evidently losing ground. I was certain she could never be in a better condition for an operation, and this, or to tap her with the certainty of being obliged to tap and retap until her life was speedily ended, was the only thing to be considered in her present emergency.

I rejected tapping as only postponing the fatal day for a little while, and as the tumor was evidently solid and cystic (a compound multilocular tumor) I felt sure it was not malignant. I hoped that by removing it I would get rid of the recurrent ascites and thus give time for constitutional treatment and give her a chance for her life. She was anxious for the operation. I frankly told her and her friends that the chances were she would die under the operation, but it offered the only chance for her life.

I was encouraged to be more hopeful of the operation, because when I had removed the former tumor (growing from her left ovary, weighing twenty-five pounds, and floating in about three gallons of ascitic fluid) nearly two years previously, I was sure she would die under the operation, so great was her debility, and so great and continuous the nasuea and vomiting. To carry her through the first operation we were compelled to give her over 100 hypodermic injections of whisky and even

then I was frequently discouraged by my assistants in the announcement that she had no pulse. These reasons and the consideration that I had no right to deny the woman her only chance of life, because the chances were greatly against me, decided me to recommend that she be brought to St. Vincent's Hospital, for ovariotomy, as soon as possible.

Accordingly she was brought to the hospital the next day (Nov. 27th), standing the journey well, seeming brighter and more cheerful by the change, and taking more food for a few days. This soon ended, and for several days before the operation she had more or less constant nausea, and for twenty-four hours previous to it she was vomiting most of the time just as before the first operation.

On the morning of Dec. 6th. her bowels were freely moved by an enema. She took ten grains of quinine in capsules at 10 a.m. The hospital staff were present with her attending physician, Dr. Cochran, of Havre-de-Grave.

At 2 p.m. after taking a good drink of whisky, she was rapidly chloroformed by Dr. Gorter. Dr. Robert T. Wilson assisted me in my dissection and manipulation of the tumor. Drs. Chum and Schaffer managed the sponges and instruments. The atmosphere in the room was thoroughly carbolized and then the spray was stopped. Instruments, ligatures, needles and sponges were placed in carbolized water and all assistants were required to wash their hands in the same.

When ready, I made an incision of four inches in the median line below the umbilicus and entered the abdominal cavity without difficulty. The tumor, of six or eight pounds weight, was found growing from the right ovary by a broad, thin pedicle without attachments. The pedicle was compressed by my oöphorectomy clamp, transfixed below it by a needle armed with a strong carbolized, double silk ligature, which was cut and tied on either side, and the tumor was then cut away on the upper surface of the clamp, and the clamp removed. The stump was touched with Monsell's solution.

I neglected to say that on entering the abdominal cavity there was a free discharge of ascitic fluid of from three to four gallons in amount.

The whole peritoneum was in a state of chronic inflammation, and although the abdominal and pelvic cavities were thoroughly cleansed and all fluids removed before we commenced to sew up the incision, it was interesting to see, before securing the last wires, how much serous fluid had been poured out by this inflamed and almost villous looking membrane. This was all removed and a drainage tube inserted before securing the last wire.

The wound was dressed with a carbolized wet cloth, a flat carbolized sponge over the drainage tube, and India rubber cloth to collect the drainage, and bandage over all. She was put to bed, wrapped in blankets, and surrounded with bottles of hot water. Her pulse was as good as

usual at the end of most ovariotimies. She was only given three hypodermatics of whisky (and these could have been dispensed with) instead of over a hundred as before; yet she never recovered from the shock up to her death, thirty-six hours after the operation. All the whisky and beef tea we could administer per rectum, and all the hot applications we could put around her, had not the slight effect to stimulate her. Reddish serum constantly poured from the drainage tube up to the time of her death.

Case of So-Called Imperforate Hymen.—A paper on this subject, by Dr. Mathews Duncan, was read before the Obstetrical Society of London. He was induced to relate the case by three circumstances:

1. There was a remarkable absence of any kind of suffering during nearly the whole time of the development of the disease. The patient had never menstruated, nor suffered from any uneasiness in connection with that function, until about eight months before admission, when she was told by a medical man that she had a lump in the lower belly. Since then, she had suffered from irregular achings. The author thought that the probable explanation of this was, that the uterine body was not distended; for facts showed that dilatation of the uterine body was more difficult and painful than dilatation of the vagina and uterine cervix.

2. The case illustrated the treatment without any injections, which had been the subject of remarks at a recent meeting of the society. An incision was made by Paquelin's cautery knife. About twenty-five ounces of the usual treacly fluid escaped; about twenty ounces on the following day, and the last of it on the fifth day; in all about fifty ounces. At no time had it any fetor. No hypogastric pressure or interference with the flow was permitted. A piece of carbolized lint was put to the vulva. The patient made an uninterrupted recovery. He thought the risk of peritonitis was increased by the washing out sometimes practiced. He thought the cautery knife was preferable to any other mode of making the incision, because its wound was not an absorbing surface.

The condition of the pudendum rendered the term "imperforate hymen" erroneous and misleading. The vagina was closed by the membrane, upon which the hymen could be seen, entire and healthy; and after the operation, the hymen could be seen to have its normal position and relations. He had made the same observations in other cases; and he had seen the hymen present when vagina and uterus were both absent. On these grounds, he regarded the view of M. Budin (that the hymen was nothing but the anterior extremity of the vagina) as incorrect. Dr. Robert Barnes said that, in these cases, toxemia arose before the blood was evacuated, from decomposition of the hemato-globulin in the retained fluid. He had not used injections; they were not called for in all cases. Dr. Gervis could hardly accept Dr. Duncan's view, that the membrane co-

cupying the area within the hymen was the vaginal wall. He thought the variations in shape of the hymen, and the absence of muscular fibres in it, militated against M. Budin's view. Dr. Carter had had under his care a case similar to that described by Dr. Gervis. He had divided the septum, and the patient did well. He thought washing out was meddlesome, unless the discharge were offensive, or there were symptoms of septicemia. Dr. Rodgers mentions a case under his own care. Some pyrexia followed the operation. The vagina was not washed out till a week after the operation, and, when this had been done, the pyrexia subsided. Dr. Galabin thought it an important question whether, in these cases, it was desirable to use injections immediately, after an interval, or not at all. The danger was greater the higher the atresia was situated. He had known of two cases of high obstruction, in which death had followed evacuation, although no syringing was used. Emmet had published a number of cases, many of them atresia high up, in which recovery had followed treatment by injections. He (Dr. Galabin) generally let the fluid flow for twenty-four hours, and then began antiseptic injections. All his cases so treated had been successful. Perhaps it would be best if a perfectly aseptic condition could be maintained by antiseptic dressings. The President said that Dohrn had entered elaborately into the developmental histories of vaginal closures. What he (Dr. Duncan) wished to show was that cases with blue thin-walled bulging between the labia were generally, often erroneously, called imperforate hymen; whereas in many, and also in cases where there was no vagina, a hymen could be distinctly seen.—*British Medical Journal.*

A New Uterine Repositor.—Flexions and versions of the womb often cause the patient great suffering, and even our best gynecologists have not always found the means of cure unattended with difficulty, if not danger. In these ailments two things are required. The womb should be replaced in a normal position and when thus *in situ*, retained.

The instruments used as repositors have been the ordinary sound or some instrument with a straight shaft, both of which are difficult to use without abrading the endometrium or causing a good deal of pain. The sound, rotating on its axis, carries the fundus through the arc of quite a large circle; considerable force is often required, and there is a possibility of swinging the womb into a wrong anatomical position as regards its ligamentous supports. An abrasion of the endometrium, corresponding to the arc through which the sound-tip passes, is likely to result. The jointed or hinged repositors are very difficult to introduce, unless the os be dilated, but less injury to the endometrium will be done while the womb is being replaced.

To obviate these difficulties and dangers this new respositor has been devised. It consists of a probe-pointed shaft, similar to on ordinary

sound, the portion near the point being flexible and easily curved as desired by turning a thumb-screw at the handle, the instrument furnishing its own fulcrum within the shaft. The extent and direction of the curvature is shown by an indicator attached to the handle. When the instrument is straight the indicator is parallel with the shaft, but when curved by turning the thumb-screw, it is deflected in the direction of the curvation.

Some of the advantages claimed for this repositor are:

1. Ease of introduction. The instrument, like the flexible probe, may be curved to suit circumstances, and so introduced into the uterus, whatever its malposition.

2. The direction and extent of curvature is always indicated.

3. The lateral movement of the fundus is avoided.

4. The injury to the endometrium is reduced to the minimum; for, the point of intra-uterine portion, moves upwards and downwards, as desired, by turning the thumb-screw, which produces a movement somewhat similar to that of the index finger when being flexed upon the palm of the hand, except the range is greater—being on both sides of the axis.

5. The index shows you, at all times, the amount of contraversion that you are producing, when you are replacing the uterus from its abnormal position.

6. It may be quite safely used to break up any slight adhesions that may be formed between the uterus and other portions of the pelvic viscera, when in its malposition.

7. Also to overcome, by somewhat forcible distension, the rigid and somewhat atrophied uterine fibres that tend to keep the uterus bent upon its long axis, thus improving the nutrition at the seat of flexion.

From an extensive trial of this respositor—for I have used it successfully in nearly one hundred cases, embracing all varieties of uterine flexion and version, in the married and unmarried—it is believed the profession will find this new instrument worthy of a prominent position in their gynecological case.—C. Henri Leonard, A.M., M.D., in *Leonard's Illustrated Medical Journal.*

Resorcin in Diphtheria.—The usefulness of this drug according to Dr. J. Andreer (*Centralblatt für die Med. Wissenschaften*) is rapidly increasing. He has used it in acute and chronic diseases and now recommends it in infectious diseases. During the last five years he has treated diphtheria of all varieties to the number of two hundred and twenty-two cases, and all of these recovered. In the mild forms, cauterization with resorcin crystals or with a concentrated resorcin vaseline ointment was sufficient. In the more severe cases resorcin had to be used internally and externally.

III.—DISEASES OF CHILDREN.

Infantile Convulsions.—The adopted and regular treatment of M. Jules Simon, of the Höspital des Enfants Malades, for infantile convulsions, is as follows: On arrival, the first thing he orders is an injection of salt and water, salad oil, or glycerine, or honey, which he administers himself, as he has too often observed that the parents or the nurse have already lost their wits. If the teeth can be opened sufficiently, a vomitive is given, which clears the stomach of any food which could not be digested—the most frequent cause of convulsions. However, the attack continues but soon ceases on applying a handkerchief, on which a few drops of chloroform are poured, to the mouth, which the child inhales largely. If the convulsions reappear the anesthetic is renewed, and the child is placed in a mustard bath for a few minutes, and then wiped dry and placed on its bed properly wrapped. Chloroform might be again administered if, after an interval, the child was seized again, and before leaving the nurse, M. Simon prescribes a four ounce potion, containing sixteen grains of bromide of potassium, one grain of musk, and a proportional preparation of opium, for he does not believe that the brain is congested in these attacks; it is rather excited, but the opium acts as a sedative. A teaspoonful of the mixture is given several times a day. On the following day the child is generally restless and irritable and ready to be attacked again, but a small blister about an inch square is applied to the back of the neck, and left on about three hours, when it is replaced by a poultice of linseed meal, and gives very satisfactory results. M. Simon, in terminating, says: "such is the treatment that I have instituted in my practice of every day."—*Proceedings of Kings Co. Medical Society.*

Feeding of Infants.—At a recent meeting of the *Académie de Médicine* M. Tarnier read a paper on this subject. He is opposed to the use of the feeding bottle, on account of the difficulty of keeping it clean, and states that in the Maternity Hospital (Paris), infants which cannot be brought up at the breast are fed with a spoon or a cup. Preserved milk, of whatever brand, is of no value for new-born infants. The following figures show the deplorable influence of the feeding bottle on their mortality. In 1881 there were 60,856 births in Paris; 14,571 infants were sent out of Paris to nurse, leaving 46,285, of whom 10,180 died, or 22 per cent. Of the 10,180 infants, 5,202 died of mal-nutrition; and of these 3,067 had been brought up on the bottle. In 1867, M. Druis-Dumont, of Caen, said that of 9,611 infants born in Calvadas, 3,204 were brought up on the bottle, and of these 986 died, or 30 per cent. So also in Normandy, a third of the infants so nourished die. In Paris

the proportion is at least 50 per cent. Of the substitutes for mothers' milk three only are of practical importance—asses', goats', and cow's milk. Asses' milk cannot readily be obtained, and is very dear. Goats' milk is weak, and sometimes gives bad results, even when the infant has been made to suck the goat. There remains, then, cows' milk. The milk must be obtained from a cow which has calved some time, and the animal must not be kept for more than a year, because after that it may become phthisical. Contrary to the ordinary belief, cows fed in the country on green herbage do not give such good milk as those fed on dry fodder. The milk should be raised to a temperature of 98°; and M. Tarnier dilutes it with an equal quantity of water, one part of sugar of milk being added for every twenty parts of water. Sugar of milk renders the curd of the milk less firm and smaller, as does also albumen water. The milk should be diluted for eight, twelve, or even eighteen months.—*Glasgow Medical Journal.*

Tenia in a Child Seven Months Old.—Dr. Schopft communicates this excessively rare case, occurring in a female child only seven months old, in whose feces the proglottis of the *tænia circumerinaelliptica* were found. According to the most recent researches, the cysticerci of this tænia are found in dogs' lice, and the dogs become infected by swallowing the parasites. Consequently the appearance of this parasite can only be explained in persons who are brought into close contact with dogs. In the case reported it was found that the child had been accustomed to play with a dog affected with some skin disease accompanied by falling of the hair.—*Ann. de Gynécol.*

Oil of Turpentine in Diphtheria.—P. Hampeln (*St. Petersburger Med. Woch.*, 1882, No. 20). The author publishes a case of pharyngeal diphtheria, in a child, two years of age, that was attacked with severe stenosis of the larynx on the seventh day of the disease. It received a teaspoonful of pure oleum terebinthinæ and two days later a small teaspoonful of the same remedy, by which it was cured and relieved from a terrible dyspnea. At the same time the paralysis of the soft palate and aryteno-epiglottideus disappeared and no albumen was found in the urine.—*Detroit Clinic.*

Infectiveness of Measles.—T. F. Pearse (*British Medical Journal*) after observing a number of cases of measles under the most favorable circumstances in regard to time of exposure, both before and after the appearance of the rash, concludes that the disease is infectious fully two weeks after the stage of desquamation; that the disease is infectious before the rash has appeared; that the period of incubation is ten days. His treatment consists of strict use of disinfectants; sponging night and morning

with a solution of thymol; administering internally sulphite of soda in ten grain doses thrice daily.—*Phys. and Surg.*

Gossip.

JOURNAL CHANGES.—*The New York Medical and Obstetrical Journal* becomes, with the new year, a weekly, and drops its long obstetrical. This is wise, and shows due respect to its medical associates and its patrons. The fact is, obstetrics and gynecology have come to be so prominent in medical journalism that all of our exchanges are wide awake in these departments and have valuable contributions, but *The New York Medical Journal* has never, with all its excellencies been superior as a *special* journal.

The Compendium of Medical Science, by Brinton, now becomes a quarterly instead of a semi-annual. It was ever a valuable summary of current medicine, and in its new shape will certainly prove more than ever attractive and valuable.

Transactions of the American Gynecological Society. The excellent abstract of the annual meeting which appeared in the December number, should have been credited to the *American Practitioner*.

THE CINCINNATI OBSTETRICAL SOCIETY has established a Library and Repository, pertaining to the Department of Obstetrics and Diseases of Women and Children.

Books, Instruments and Morbid Specimens are earnestly solicited. Due credit will be given to contributors.

Donations may be sent to either of the undersigned:

DR. I. TRUSH, 144 Broadway.
DR. E. JONES 177 Baymiller.
DR. C. O. WRIGHT, 76 W. 8th.

TRAINING SCHOOL FOR NURSES IN CHICAGO.—This organization, now only about two years old, has become so much of a success at the County Hospital, that citizens have contributed funds enough to buy a lot and commence the building of a permanent Home for the school, within half a block of the college. Probably no good organization, touching in its work the practice of our profession, has ever been started among us which has worked more quietly and modestly than this, and certainly no other has, in so short a time, established itself on so firm a foundation of public confidence in its va ue and usefulness.—*Med. News.*

THE MILK OF INTEMPERATE WOMEN.—A correspondent of the *Lancet* states that the milk of drunken women contains enough alcohol to burn.

A TRAINING SCHOOL FOR NURSES is to be attached to the Kings County Hospital on the plan of the one at Bellevue.—*Med. News.*

THE MOTHER OF THIRTY-TWO CHILDREN.—In a case lately heard at Aberdare, in which a young man name Hooker was ordered to contribute toward the maintenance of his father, it was stated that the defendant's mother had had thirty two children.

Defendant said that on three occasions she gave birth to twins, twice she had triplets, and afterward four children at a birth.—*American Med. Weekly.*

Bibliography.

Transactions of the Medical Society of the State of New York. For the year 1882. No State society of the Union contributes more to the important matters of the profession than the New York society. Its members are among the foremost of the country in ability and none are so ready to do good work. The present volume of Transactions fully comes up to the expectations of the profession in its valuable papers.

Probably the most noteworthy feature of this year's transactions is the Report of the committee on Ethics, wherein it is provided as follows as a substitute for the requirements of the American Medical Association, to-wit: "Members of the Medical Society of the State of New York, and of the Medical Societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity." This report seems to have had a very honest discussion by prominent members of the society. That it should be met with prompt disapproval by the American Association, was anticipated. What its ultimate effect upon professional conduct will be, remains to be seen.

Papers pertaining to our special department of medicine are not of sufficient importance to occupy space.

The officers for this year are Dr. Harvey Jewett, *President;* Dr. Wm. M. Smith, of Syracuse, New York, *Secretary*, to whom we are under obligations for this annual copy.

The Hospital Treatment of Diseases of the Heart and Lungs, with over Three Hundred and Fifty Formulæ and Prescriptions, as exemplified in the Hospitals of New York City. By CHAS. H. GOODWIN M.D., New York.

It is not often that we find so much excellent matter crowded into the small space of 200 small pages. There is probably no clinical work that exactly occupies the place of this little book. Many physicians go to New York with the expectation of gathering up the details of the special practice of the prominent attending physicians in the hospitals, pertaining to special departments. The object of this book is to give the methods in detail of the *treatment* of the important disorders of the *heart and lungs* as pursued by the physicians in the several hospitals of New York City. So we have the special plans of such able men as Alonzo Clark, Austin Flint, Loomis, Janeway, Jacobi, J. Lewis Smith, and a large list of the well known hospital attendants. Not only the general plans are given, but some cases are reported in full, so that the reader has almost the advantage of a daily attendance upon hospital service. As we have already said, we have rarely seen so much excellent matter crowded in so small space. Any of our readers who desire to get these hospital suggestions in full, may get the book by addressing Dr. C. H. Goodwin, 245 West 53d St., New York.